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INTRODUCTION

THE care of the mind involves development, education, and training. The terms are by no means synonymous. A highly developed mind, for example, is not always a well-balanced one. If not, it offers proof that too many years and too much energy have been devoted to mental development at the expense of proper training in correct introspective judgment.

That the number of badly balanced persons is increasing is shown by hospital records. It is an open secret that insanity is steadily making headway—increasing at a rate out of proportion to the growth of our population. And this at a time when Education is the watchword of every community, and when illiteracy is steadily decreasing in all portions of the civilized world.

But actual insanity is simply the more tangible form of disturbed mental balance; and for each person who exemplifies this extreme degree of aberration there are scores who suffer from purely mental maladies far less patent to the casual observer but nevertheless just as surely the result of disturbed mental balance. The vast army of "neurasthenics"—a horde that has been steadily

increasing since the days of our grandfathers—offers evidence that mental hygiene is not keeping pace with hygiene of the body. And the existence of that still larger army—those peculiarly endowed persons who are able to cure their imaginary ills by the simple process of believing that the ills *are* imaginary—demonstrates that a vast number of persons are suffering from maladjustment of their mental balance-wheels.

For we must always bear in mind this fact: The diseased conditions of the mind which pervert the judgment in one individual to make him a lunatic, in another to produce hysteria or neurasthenia, and in a third, the plastic medium of the faith healer, are dangerously close of kin. In most instances the ailment represents a difference in degree rather than a difference in kind. And one condition lapses into the other so imperceptibly that not even the wisest physician can say where one ends and the other begins.

When, therefore, the psychiatrist warns us that we are showing grave symptoms of a nation afflicted with "nerves," he is simply telling us metaphorically that our minds are not being well cared for, and are showing the effects of misuse.

Professor Dubois recently expressed this in more direct and unmistakable terms. "There are some individuals whose reason is disturbed and whose actions are guided by strange sentiments," says Dubois. "When the mental disorder is very

pronounced we confine these patients as *madmen* or *lunatics*. They are numerous, for, according to statistics, it is necessary to consign nearly ten persons out of a thousand to the asylum. In slighter degree, the disease permits of the subjeet living still in society, though his actions may be peculiar and often culpable; we speak then of the *semi-insane* or *unbalanced*, and endeavor to establish the degree of their responsibility. Finally, when the mentality of the patient approaches the normal, and somatic functional symptoms seem predominant, the pathological condition is termed a *neurosis*. These ' nervous ' cases constitute the great bulk of the clientèle of the neurologist, while the psychoses properly so-called belong to the domain of the alienist. * * * There are only *differences of degree* between these conditions. In all of them we find abnormal states of mind."

In other words, this ever increasing army offers proof that we have over-exerted ourselves in the direction of mental development at the expense of mental poise. At the same time it suggests that it is high time to consider the balancing, as well as the developmental process. To do this we must raise mental hygiene to the level of physical hygiene, so that soundness of mind will be concomitant with soundness of body.

I

Caring for the Child's Mind

"WHETHER a person becomes nervous or not," says Professor Lewellys F. Barker, "depends upon two great factors (a) the constitution he inherits from his parents and through them from his ancestors generally; (b) the influences to which his body, especially his nervous system, is exposed during life, *and particularly during childhood.*"

The italics are my own. For I believe that it is almost impossible to overestimate the importance of the first few years of life, in determining the physical and mental condition of the adult. It is possible to wreck the physique of the man by a few years of improper feeding and hygiene in childhood. The distorted little figure of the hunchback offers convincing evidence. Yet those familiar with psychic abnormalities know that the proportion of mental dwarfs and hunchbacks is far greater than those showing physical defects —individuals whose minds have been distorted by bad mental pabulum administered in childhood. The two conditions often go together. But as a

rule, improper nourishment is the penalty of poverty, while bad mental training is observed more frequently in the upper walks of life.

But in any station in life it is possible to produce one or both conditions, by improper nourishment and care during childhood. Improper care of the child's physical condition is frequently the first direct stepping-stone to a régime of bad mental training. Thus the mother who allows the caprice of the child to influence her in selecting its diet, is courting two dangers—physical deterioration and mental perversion. Once the child learns that its capriciousness about diet may be gratified through wilfulness, it has entered the highway leading to improper nourishment. The result is inevitably a puny, sickly child, stunted intellectually, and often morally depraved.

The remedy for food-caprices is obvious: the child should be taught to eat what we know it should eat, regardless of its likes and dislikes, which, after all, are not strongly developed in childhood. "The child that learns to eat and digest all wholesome foods," says Professor Barker, "and who is not permitted to cultivate little food antipathies, makes a good start and avoids one of the worst pit-falls of life with which medical men are very familiar, namely a finical anxiety concerning the effects of various foods, all too likely to develop into a hypochondriacal state."

In the days of our grandparents it was cus-

tomary to allow the child a wide latitude in kinds of food, even very young children eating the same foods as their elders. Later came the fad of giving children measured portions, and greatly restricting the variety in diet. But the accepted modern method is a more rational intermediate course between these two extremes. Give the child a liberal variety of simple foods, such as meat, vegetables, and fruits, avoiding such things as rich pastries, and such beverages as tea, coffee, and alcohol.

For it has been found by practical experiment, and laboratory observations, that a variety of foods tends to increase digestive powers; and that even indiscretions of diet, although temporarily distressing, tend to make the child hardy. Pampered children are likely to have weak digestive tracts—largely because those tracts have never been called upon to resist improper foods. The little urchin who munches green apples, green cucumbers, and almost anything else that gets within reach, is flirting with colic and other distresses. But the colic is seldom of very serious nature; and it is a matter of common observation that these same children rarely have digestive troubles later in life.

Of course no one would advise feeding green apples or cucumbers to youngsters, although they will surely eat them occasionally without help or knowledge of their elders. But, nevertheless, there

is a measure of compensation for such indiscretions, in the fact that the occasional eating of improper food is unlikely to have a deleterious effect upon a stomach accustomed to a great variety in diet—a digestive tract that is able "to meet all comers," so to speak. The child that has developed that kind of a fighting stomach will not be found later in life measuring his portions in deadly grams and cubic centimeters, or choosing his rations for the "calories" they represent, fletcherizing, or dabbling in "health-food" fatuities, which are the highways to dypepsia and the dispensary.

Giving the child a variety of simple foods, then, is simply a practical system of hardening his internal organs, and preparing them for the battle of life. A somewhat analogous system of hardening the nervous and muscular systems should be pursued at the same time. Indeed one system should supplement the other.

Building up Resistance

Most mothers dress their children too heavily, particularly in infancy, before the little ones have reached an age at which they can express their feelings intelligently. But during the first few months of life this is of little consequence if practiced consistently. When the child begins to run about, however, a gradual course of judicious

hardening of the body is most desirable, to strengthen the resistance to colds and other diseases; and to insure an indifference to climatic changes later in life. An active child requires less clothing than an adult, and, unless it is of the non-reacting, feeble type, should be clothed much lighter. In this way the skin becomes hardened to ordinary changes of temperature, sometimes to an astonishing degree, and this condition will persist through life, and be a great source of comfort in our changeful climates.

A robust child should be given a cool bath every morning, and should of course be encouraged to be out of doors taking bodily exercise most of its waking hours, regardless of weather. It is astonishing how immune to colds and common childhood complaints such children become—sturdy little citizens, well-equipped to battle successfully with the great problems of life, the most important of which is health.

Strengthening the constitution, if we may so call it, increases the resistance to pain. And this resistance produces an insensibility, or indifference, particularly in children who play with other youngsters of their own age, unhampered by the solicitous supervision of a doting parent. For children make light of the bumps and trifling hurts of their companions, and learn to regard their own injuries with indifference. Thus an obtuseness to trifling injuries lays a secure foundation

for resisting, with proper fortitude, those greater injuries, both physical and mental, that will surely come later in life. In this manner a most beneficial psychic and physical hardening process is accomplished.

A child whose physical training has been along the lines just outlined until its tenth year, let us say, has taken a tremendous stride toward sound physical adult life. If its mental training has been correspondingly good, we may predict with greatest certainty that, barring some extraneous calamity, such a child will round into full manhood, or womanhood, with considerably more than even chances for a long, vigorous life.

It is obvious, therefore, that the principles of mental hygiene should be applied at quite as early an age as those of physical hygiene. They should, indeed, begin in earliest infancy. For the task is most important, and requires far greater intelligence and persistence on the part of the instructor, than mere physical training. The kind of mental training that the child receives during the first six or seven years of its life may taint or tarnish its entire future. Obviously, then, the common type of nursemaid is quite as incompetent to direct the child's mind, as to supervise the later, or "finishing-school" stage. Indeed, an ignorant nursemaid would do far less harm in a boarding-school than in the nursery.

Harmful Early Impressions

It is impossible to overestimate the effect of early impressions upon the mind of a sensitive child. If you will think back over your own childhood for a moment, I venture to predict that you will recall some early (and probably false) impression that you still remember vividly, to bear out my assertion. It is not merely the baleful effect of momentary mental tortures that children suffer from such impressions as fear of the dark, fear of goblins, and fantastic animals, that is important, but suppressed fears that may cause actual insanity later in life. The child that is instructed properly is unlikely to become a prey to these haunting fears, because it develops a rational, instead of a superstitious trend of mind—an attitude that tends to keep the ship of mentality on an even keel, even in the roughest waters.

Children with bad heredity require more careful instruction than those with a good heritage. But unfortunately these delicately balanced children usually live in a tainted atmosphere, even when their actual instruction is excellent, since one, or both of their parents are neurotic. Children learn quite as much from observation of the deportment in their associates, as by any course of didactic instruction. Indeed, it still remains an open question as to just how much inherited instincts are responsible for the peculiarities in

the children of neurotic parents, or to what extent environment influences the child. Both conditions play an important part, and undoubtedly environment tends to develop the inherited tendency to instability.

There can be no doubt, however, that even a nervous child with a bad heredity may have its mental balance firmly centered by proper environment. We see examples of this in orphan asylums. On the other hand, the bad example of parents may produce distressing nervous conditions even in children of stable organization and good heredity.

"In this domain of nervous diseases it is easy to prove the contagion of example," says Dubois. "We see little girls imitate their nervous father or hysterical mother, throwing themselves upon the sofa at the slightest fatigue and complaining of backache and headache. They are sensible to all exterior influences, cannot take food which they do not like, and become unnerved like their mother. They play so well the part of little nervous women that they are caught in the snare and become so really. Nervous parents, think of this danger of moral contagion."

What is to be done with a nervous child placed in such surroundings? The remedy that suggests itself is removal to other surroundings. But this is usually impracticable, and for several reasons is not desirable if such a change implies denying

the child parental care. We could, indeed, correct many of the tendencies to nervous outbreaks in the child by making its surroundings similar to those of the "institution children" reared in children's homes. But while such surroundings stabilize the nervous system, they also stifle the higher psychic centers, because in such places the subtle "mother's influence" is wanting. In a phrase, the institution reared child tends to be stable, stoical—and stupid. And stupidity is a poor substitute for individuality, even though that individuality be neurotic.

The only practical method at our command is to impress upon parents the importance of teaching by example, particularly in little, and apparently inconsequential things. One of these apparently unimportant things is the use of the word "nervous" by many neurotic parents. These persons use the term to express their own wavering condition, or to excuse wilfulness in a child; but in either case the use of the word is pernicious, and cannot be condemned too severely. It is a word that should be eliminated from conversation with, or in the presence of, children. Parents who constantly speak of "being nervous" or of certain things "making them nervous"; or who excuse their own actions, or those of the child, on the ground of "nervousness"; are preparing fertile soil for nervous outbreaks in the child later in life.

Nothing can be more demoralizing to nervous stability than constant reference to the opposite condition. The impressible child seizes upon the fact that there is such a condition as "nervousness"—a thing that no normal and healthy child should realize—and makes this an excuse for certain actions that are simply the result of wilfulness or selfishness. One exhibition of childish temper that is excused or condoned on the ground of "nervousness" leads to another, and still another.

If the word must be used at all, it should be given the same interpretation as "naughty," or something reprehensible. Above all things do not let the child of nervous temperament, if it must be pampered or favored in certain ways, know that it is so favored on account of its delicate nervous organization. For these children are quick to seize upon this excuse for exhibitions of lack of self-control, or other erratic actions, which lay the foundation for mental instability.

Another greatly abused term, one that should be stricken from the lexicon of the nervous child and its parents, is "temperament." Many persons use this term to explain a peculiarity or defect, or condone a fault. Others seem to regard the expression, "he is temperamental," synonymous with "he is a genius." But psychiatrists give a very different, and much less flattering interpretation. To these the

"temperamental" person is a very unstable one.

But whatever the intent—whether the word is intended to convey the impression that a certain person is unusually bright, unbalanced, has excessive nervous energy, or is simply a degenerate—it is a bad word to use in the presence of children. For it is used far too often as a cloak to screen eccentricities. And whether these eccentricities be the early manifestations of genius, or, what is far more likely, abnormality, it is bad mental hygiene to gloss over peculiarities by the use of such an ambiguous term.

The fact that a child shows great precocity is no valid reason for giving it a special training that differs materially from that of less brilliant children. There is little danger that such training may stifle a budding genius. For genius will not be suppressed by discipline intended to correct eccentricities. On the contrary, an attempt to hold the precocious child's mind to the normal channels of childhood, will be far more beneficial than encouraging it to run off on peculiar tangents. Moreover, one can never be certain that the child's apparent genius may not be simply eccentricity, or abnormality. Most precocious children fail to rise to a height even approaching the realm of genius. And therefore it is doubly important that these children be schooled in normal trends of thought. A race-horse that cannot

run, but which has been trained for no other purpose, is indeed a worthless creature.

The Dangers from Moral Contagion

Another reason why these highly organized, intelligent, and sensitive children, require more careful training than the phlegmatic ones, is the fact that such children are more susceptible to "moral contagion" from the actions of their parents. It behooves the parents of such children, therefore, to encourage them to indulge in the occupations and amusements of normal childhood, supplementing such training by good example. The companionship of other robust children has a healthful, stabilizing effect.

The practice of frightening young children, or arousing their apprehensions unnecessarily, is most reprehensible. This is especially true as regards the kind of fright that appeals to the moral nature, such as superstitious fears of unnatural things, referred to a moment ago. There appears to be a great difference in ultimate effect upon the nervous system, between ordinary physical frights, such as a narrow escape from falling while at play, or a passing automobile, and the kind of psychic terror produced by the fear of goblins or ghosts. Frights caused by physical danger are quickly forgotten; but superstitious fear is persistent, and its evil effects can hardly

be overestimated. We are just beginning to appreciate that some of the most incurable forms of insanity, like many of the intractable nervous diseases, such as stuttering, are the direct result of childhood frights. "Every ugly thing told to the child," says Mosso, "every shock, every fright given him, will remain like a minute splinter in the flesh to torture him all his life long."

The foolish mother, or ignorant servant girl, who frightens a child into obedience by tales of ogres, bogey-men, or anything mysterious, is preparing fertile soil for the development of mental instability. We may go farther, and say that the teaching of any superstition whatever, is likely to give the child an entirely perverted attitude of mind. For the mind of a child is above all things logical—much more so, indeed, at this period of life before habits of thought have stifled logicality, than the mind of the average adult. It does not distinguish between one kind of superstition and another, simply because no *logical* distinction exists. And for this reason the thoughtless or ignorant teaching of a single harmless superstition may pave the way to a belief in innumerable harmful ones.

Possible Consequences of Little Deceptions

Let us consider, for example, the most common form of deception practiced upon young children,

that of the belief in Santa Claus. To the majority of people there appears no possible harm in deceiving the child during its early years about the jolly reindeer driver, and later correcting the deception. And undoubtedly this in itself is one of the most harmless of foolish deceptions, because it lacks the fear-producing element. The tales about good fairies are likewise relatively harmless in themselves, and for the same reason. But even these seemingly harmless myths may lay the foundation in the child's mind for a belief in all manner of supernatural beings. If there is a mysterious person who can fly through the air and drop down chimneys, as Mother and Father have taught, what is there inconsistent in some ignorant servant girl's tales of goblins, or ghosts? To the child's mind one is quite as reasonable as the other. And so the foundation is laid for a superstitious trend of mind that is not consonant to practical twentieth-century enlightenment.

On the other hand, if the child has been told that Santa Claus is a purely imaginary person, it will be less ready to believe stories about goblins or other imaginary monsters. To state the case frankly, then, children should not be deceived about Santa Claus, or any other myth.

But, it is objected, by doing away with Santa Claus you are robbing childhood of one of its

greatest pleasures—killing what little romance is left in this all too prosaic life! Not at all, my dear reader. I have among my acquaintances several children, now almost grown, who were never taught to believe in the existence of Santa Claus. They were told, as little children, that Old Kris Kringle was purely a mythical person, and that the hangings of stockings for him to fill was simply a pretty custom. Never for one moment did any of those children believe that there was really a Santa Claus. And yet I have never seen children take greater delight in hanging up their stockings on Christmas eve, or in planning for the mysterious visits of this purely imaginary character.

The good effect of this training was shown in an incident that happened when one of these children was six years old. This child had been informed about the chimerical nature of all "mysterious beings" as well as Santa Claus. One day while playing with a little neighbor, she heard a harrowing ghost story told by a superstitious maid. The child at once expressed her doubts about the truth of the story, since her father had told her that "ghosts were like Santa Claus, just imaginary things." Nor could the maid shake her skepticism: her father's word was, in her mind, the highest court.

A child with that attitude of mind is not likely, later in life, to stumble on the rock of superstí-

tion—a rock that fills our asylums and sanitariums.

Early Religious Training

In this connection the question arises as to the age at which the religious training of the child should begin. I am fully aware that in this field each parent is likely to be guided by his own particular religious bias, and ready to challenge the wisdom of all others. It is the one department of education in which the standards and methods of our parents and grandparents are likely to be considered all-sufficient for our children. But nevertheless, the practicalities of religious beliefs, like most other fields of thought, have changed and progressed in the last century. And our attitude toward the teaching of religious subjects to children should have changed correspondingly.

Fortunately, the tendency of religious teaching to-day is to exalt the beautiful side of religion, and suppress the terrifying doctrine of eternal punishment. But for those who accept the literal interpretation of this ancient belief (if, indeed, there be any such persons) the warning given a moment ago against the dangers attending psychic frights in childhood should be repeated and emphasized. Terrifying the child at this receptive age with stories of eternal punishment, is laying

a powder mine for a future explosion. If the child is the nervous, sensitive type, this explosion will come almost inevitably in one form or another sooner or later.

Its worst form, of course, is some type of religious mania—an all too common form of mental aberration which shows the effect of the exploded powder mine. But besides this most terrible disaster there are less pronounced afflictions that "will remain like minute splinters in the flesh" just as in the case of any other childhood fright.

"Keep out all fear of the brutal things men have taught children about the future," says Luther Burbank, the lover of plants and children, in his book, *The Training of the Human Plant*. "I believe emphatically in religion. God made religion, and man made theology, just as God made the country, and man made the town. I have the largest sympathy for religion, and the largest contempt I am capable of for a misleading theology. Do not feed children on maudlin sentimentalism or dogmatic religion; give them nature. Let their souls drink in all that is pure and sweet.

"Rear them, if possible, amid pleasant surroundings. If they come into the world with souls groping in darkness, let them see and feel the light. Do not terrify them in early life with the fear of an after world. Never was a child made more noble and good by the fear of a hell. Let nature teach them the lesson of good and proper

living, combined with an abundance of well-balanced nourishment. Those children will grow to be the best men and women. Put the best in them by contact with the best outside. They will absorb it as a plant absorbs the sunshine and dew."

The Persisting of Early Impressions

Any one who doubts the persistency throughout life of childhood impressions will find food for thought by observing the acquired habits that persist even in those whose minds are completely wrecked. It would be possible to cite specific instances by hundreds.

A middle-aged man who was under my care for some time had become so completely unbalanced, a few years before, that it was necessary to confine him in an asylum. He was, indeed, considered dangerous, showed violent fits of temper, and had to be watched constantly night and day. Eventually, however, he became less agitated, although still greatly confused, and much demented. His disease was incurable, but his condition had improved sufficiently so that, with proper supervision, he could be given many liberties, and was able to enjoy many of the pleasures of life.

When the hunting season arrived this patient asked his medical adviser to be allowed to go shooting. The request seemed preposterous, coming from an irresponsible man who was subject

to violent fits of temper. But the physician had had a wide experience with similar cases; and he had learned, moreover, that this patient as a boy had been given unusually careful instruction about handling a gun while hunting. Thus it had become instinctive with him to carry his weapon with the muzzle always pointing away from his companion, and never in any circumstances to point a gun at a person.

Feeling confident that his patient's early training would dominate his actions, the physician decided to grant his request to go shooting. Moreover, the doctor decided to join him in the hunt, although fully aware that the patient disliked him thoroughly, and had threatened him repeatedly.

The physician's decision will strike most persons as foolhardy. But subsequent events proved the soundness of his judgment. For although the patient was at times violently angry with the doctor during their hunting trips, the thought of using his gun as a weapon never suggested itself. Or, if suggested, was at once rejected. The early training in the use of weapons still dominated a certain portion of this demented man's mental mechanism, although most of that mechanism was so badly askew.

Since habits of thought established in childhood undoubtedly lay the foundations for future mental attitudes, it is obvious that certain habits should be encouraged, while other tendencies should be

diplomatically but persistently suppressed. Industry, either in work or play, should be stimulated to become a habit; for idleness in children, as in adults, breeds all manner of mental and physical disorders. Once the habit of industry is acquired it tends to persist through life.

Professor Ernst Haeckel, whose life has been an almost continuous series of great achievements, attributes his activity to his early training. "My mother," he says, "would never permit me to be idle for a moment. If I stood at the window day-dreaming, she would always urge me to be up and doing. 'Work or play,' she would urge, 'but do not stand idle.' Through this reiterated admonition, physical activity became a life-long habit with me, and work almost a necessity of my being. If I have been able to accomplish my full share of labors, this is the reason. I am never idle, and I scarcely know the meaning of *ennui*."

Idleness is the handmaiden of another fault, indecision. Indeed, the habit of idleness generates indecision. The child that shows this tendency to wavering should be taught tactfully to make decisions, and abide by them. It is good mental discipline to acquire the habit of making *some* decision, even though it be a bad one.

Didactic Training Versus Muscular Development

It should not be understood that encouraging activity in children implies urging the child to

make unusual efforts in its school work. The bright, nervous child, frequently needs restraint rather than urging in this particular field of activity. Our modern school curriculums tend to hurry the little ones on much too fast in the lower grades for the welfare of their nervous systems; and err in the opposite extreme in the higher grades, and colleges.

Instead of sending precocious children to school early, and holding them to the task, it is far better to devote more time to the development of their muscles, and strengthening their nervous systems (a " psychic hardening ") for a few years. For if the child is below standard physically, as is frequently the case, this driving process tends to restrict, instead of develop, its natural capacities. And even in the exceptional cases, where the mind develops at the expense of the muscular system, this brilliancy of intellect is scant compensation for the halting, unstable physical mechanism.

On the other hand, hard study is not injurious to the normal, healthy boy or girl. It is good for them. It teaches them to use their faculties, even though the studies themselves may be of little actual value later in life. Indeed, the real test of value in a school or college course is its efficiency in teaching students how to acquire knowledge, rather than in the amount of knowledge actually imparted. The college graduate is often singu-

larly lacking in useful information. But if he has learned the knack of acquiring knowledge during his college course, his training may be considered successful. Failure to acquire this, however, is indeed utter failure.

Highly organized, sensitive children should not, as a rule, be permitted to indulge in strenuous mental contests, such as striving for prizes at school. But if such contests are permitted, the parent should note very carefully the effect upon the child's mind and nervous system. Children present two types of mental attitude in these contests. In one, the pleasure of success predominates; in the other, it is rather the fear of defeat. In other words, one "loves to win," the other "hates to lose." And psychologically these attitudes of mind may be very different. There are types of persons who gloat over winning, but who feel little or no humiliation in defeat; there are others who feel relatively little elation at success, but who are absolutely dejected by failure. If your child is of this latter type—and no one can determine this as well as the parent—do not let him enter contests which require prolonged preliminary effort. Contents brought about on the spur of the moment have a far less deleterious mental effect.

Beneficial Influence of the Playground

Nervous children are greatly benefited by playground contests with other children of their own age. If denied the companionship of other children, or kept in the presence of older people, the nervous systems of such children suffer from overprotection. Such children are greatly benefited by attendance at public schools. Even large private schools, at least in America, do not serve the same purpose. For the beneficial association with "mixed classes" of children is wanting in such schools, since the pupils are, almost without exception, the children of well-to-do parents. This has its advantages, of course; but these are outweighed by the disadvantages. For every child, when it reaches maturity, will be thrown in contact with persons from all walks of life; and its future success may depend largely upon its ability to interpret the mental attitudes of persons in every class. In other words, to understand human nature.

No amount of experience in adult life will give the peculiar intuitive capacity to estimate character that the child acquires by association with heterogeneous playmates. Moreover, this mingling tends to stabilize the equilibrium of the nervous child.

Persons of either sex, who have been denied these playground associations, lack a well-rounded

education, even though the didactic part of their teaching may have been most complete. For the playground, rather than the classroom, is the builder of character. Here the child finds himself placed in a niche consonant to his ability, physical and mental. Paternal wealth, or position, counts for nothing, only inherent worth as judged by the peculiarly accurate standards of playfellows. Thus the child learns, by contact with its playmates, to gauge its own abilities very accurately. The conceited only child, obsessed with self-importance, soon learns his own shortcomings. It is a helpful "leveling process" for the bumptious youngster, and equally helpful to the intelligent but timid child, by teaching confidence and self-assurance.

Some mothers hesitate to send their children to a public school for fear of the "coarsening effect" of contact with such heterogeneous companions. Children of such mothers are usually mollycoddles—the very children who would be benefited by contact and competition with all classes of children. A proper home influence will counteract any coarsening effect, while the playground offers a kind of useful education that no home supplies.

Many a doting mother has shed bitter tears at the sight of her usually carefully pressed and creased boy, returning from school, bruised and bespattered after a set-to with some schoolmate.

But her tears might be spared: this same encounter may " be the making " of her boy. No single event in a child's life is likely to have such positive and permanent—and in the end, beneficial—effect as a square-toed fight.

Most mothers will take radical exception to this statement. But mothers are not competent judges: they lack practical experience. Most fathers, I feel sure, will concur in the assertion, if they will recall the sensations produced by their first youthful encounter. This sensation cannot be produced by any other experience. In such contest, the boy for the first time, finds himself thrown upon his own resources—a test of wit, strength, and courage. And, win or lose, a new sensation—one that the child will never quite forget—is born forthwith. It is a practical manifestation of the primal fighting instinct—an instinct which every successful man must possess. And thus, just as the companionship of girls has a refining influence on the boy's mental fibre, contests with boys develop that other, and equally essential quality.

And so I believe that any boy who is reared in seclusion from boys of his own age, and grows up without having at least one good square-toed fight, has been deprived of a most important part of his education. And being deprived of it, will always retain a somewhat perverted outlook on life,—a defective insight into human nature.

Moreover, the boy who is a good fighter, is far less likely to be quarrelsome than the coddled nursery boy.

One must not confuse the petulant child, who flies into a passion and strikes his smaller playmates or larger companions knowing that there will be no retaliatory blow, with the sturdy playground fighter. There is a wide gulf between the types. Yet the playground itself is one of the best remedies for petulancy.

On the other hand, pent-up emotions are dangerous elements in the developing child. The child who sulks needs just as positive discipline as the one that strikes. "Especial care should be exercised to prevent disagreeable feelings and emotions becoming transformed into the more persistent moods," says Professor Barker. "It is often better for an emotion to discharge itself in the form of some definite act and thus bring it to an end rather than through the partial suppression of it, have it last in the form of a disagreeable mood, for a considerable length of time. Pouting, sulkiness, harboring a grudge, or bearing malice, should be regarded as symptoms seriously to be considered and corrected. For if they are tolerated in the child, habits may be begun which will prepare the soil for the development, later in life, of the seeds of enmity and suspicion; the full-grown plants are the persecutory ideas of the paranoiac states.

The Remedy for Petulancy

"How to manage a child in a fit of temper has been discussed. When possible it is desirable to cut it short at the beginning. Some parents rejoice to see their children reveal violent temper, and are glad that they can fly into a passion, turn red as a beet, clench the fists, and attack the individual with whom they are angry. Such attacks if frequently repeated are very deleterious to the nervous system. Some parents try to stop them by petting and indulging the child, a kind of licensing of irritability which rarely, if ever, pays; others threaten the child or corporeally punish him; a mistake, usually, in the other direction. As a rule most may be accomplished by purposefully ignoring the attack, perhaps isolating the child for a short period; in some cases a warm bath and the bed may be the best remedies.

"In older children the habit of giving way to temper may sometimes be broken by inculcating the conviction that one who loses his temper makes a fool of himself, loses his dignity and excites the disdain and contempt of his fellows: the horror of looking ridiculous, of making a donkey of one's self, may be a most powerful lever in conquering a tendency to attacks of fury. . . .

"Let no one think, however, that lack of feeling, or a nature impoverished on the emotional side is desirable or that it protects against nervous

disease. The elevating emotions, hope, joy, expectation, love—are constructive and are judiciously to be cultivated; the depressing emotions—despair, sorrow, regret, and fear—are damaging to the nervous system if long maintained. The highest feelings of all, including the religious, the ethical, and the æsthetic—inspire noble and useful conduct, and in the education of nervous children these sentiments are to be favored in their development, in due degree, at a suitable age."

Defective eyesight, when it exists, is frequently overlooked in young children. This defect accounts for quite a high percentage of apparent backwardness in school children, and may give rise to temperamental peculiarities. Parents should, therefore, have their children's eyesight tested at an early age if there is any reason to suspect defect. They can, indeed, make tests at home that will determine with sufficient accuracy whether the child is near-sighted—the most frequent congenital defect.

A very simple method of doing this is to select pictures of objects with which the child is familiar, such as the domestic animals from the "A B C Book." By placing these one at a time at a distance at which their outlines are just discernible with certainty by the parent's eyes (supposing, of course, that the parent's vision is normal) and asking the child to designate each, the vision of a child can be readily determined. For the normal

length of vision, even of a young child, is the same as that of the adult.

Special symptoms that should arouse suspicion, particularly in school-children old enough to read, are headaches, and nausea that is produced by scrutinizing the printed page. Here the defect is probably astigmatism—an irregularity in the shape of the lens, or eyeball—which requires the attention of an oculist, and should be corrected by properly fitted glasses.

Every parent is confronted, sooner or later, with the problem of choosing an occupation for his child, or acting upon the child's own selection. The general consideration of the question as to just what part of the determination should rest with the parent, rather than the child, is much too complicated for discussion here. But there are certain elements in the general proposition that present themselves in the case of every child, and should not be evaded. The two most vital ones are, (1) the child's adaptation to the calling selected—that is, its ability to perform its part successfully; and, (2) the parents' ability to perform their part, which is, in the last analysis, usually the pecuniary item. To this should be added the parental influence in guiding the child in making a selection best adapted to its abilities and condition.

Even when the financial part need not be considered it is frequently most difficult to make the child's choice and its natural ability coincide.

Moreover, it is quite impossible to determine during the early years of childhood, for what calling the child will be best adapted. For those who are unhampered financially, this is, of course, the great item for serious consideration. And this suggests the reason for the general rule that it is better not to make any definite selection during the child's early life. For the wisest person in the world is unable to predict with certainty what the inclinations and ability of a child of six will be at sixteen, or twenty.

There are well-advertised men who make a "specialty" of "fitting round pegs into round holes." Were these charlatans actually able to do even a tithe of what they claim, they would be the greatest benefactors of mankind. For a very large proportion of unhappiness and discontent in this world is caused by misfitted "pegs." But no single element can be determinative in this peg-fitting problem. Circumstances, temperament, inclination, and natural adaptation must each be taken into account, and the opinions of the child, parents, and teachers must all be considered. And finally, the child's capacity to carry out his part of the compact, and the parents' ability to perform their part, must be largely determinant, after all the other elements have been considered.

To attempt to determine in infancy what the grown-up child shall follow as a vocation, is courting disaster. Such early selection is, and should

be, the privilege of Royalty only. But most of us doubt the wisdom of this practice, even in king-making. For although there have been great kings who were the sons of kings, we cannot forget the numberless exceptions. None of the five greatest rulers of Rome who reigned in succession were hereditary monarchs.

"Find out what each child is capable of doing—that is to say, his actual aptitudes; and teach him to succeed in these," says a modern philosopher. And this is but an echo of the philosophical wisdom of all ages.

Sex Hygiene

One cannot consider the question of mental hygiene for the child without specific reference to the subject of sex hygiene which has recently become a popular fad. Yet it should be evident to every one that there is no real reason, or justification, in this sudden activity about a subject that is as ancient and as immutable, as civilization itself.

Any subject is fraught with grave dangers when it is promulgated as a fad. Likewise any vice which is inherently attractive is likely to be disseminated, rather than restricted, by propaganda. Certainly the practice of giving great publicity to the sex problem—treating the subject openly in the presence of children—will do much more harm

than good. For it is likely to direct the child's mind into channels of investigation that should not be explored until a later period in life.

The fact that such channels should, and do, eventually become open highways, suggests the only ground upon which the child may logically be instructed. It is worse than futile to attempt to frighten the child into believing that a thing must be wholly bad, when this child will discover very shortly (much quicker than most parents realize) that grown up persons do not consider the subject with any such degree of condemnation. But it is possible to impress upon it the fact that what may be a natural attitude of mind for adults, is harmful for children.

If presented on any other ground the natural logicality of the child will prick the bubble of deception. But by impressing upon its mind the fact that children should shun certain things, just as it is better for them to avoid the use of tobacco, alcohol, tea, or coffee, in their early years in order to reach full development, the desired effect may be accomplished. But do not, under any circumstances, attempt to instruct the child by frightening it; for such a course is likely to have exactly the opposite effect from the one intended. Moreover such a course may result in producing an abnormal suppression of a natural instinct, with vitally disastrous consequences later in life.

Pope may have had this particular vice in mind when he wrote:

Vice is a monster of so frightful mien
As to be hated needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.

In any event, the statement of the poet-philosopher applies just as surely to the problem of sex hygiene, and just as definitely to conditions to-day, as it did to conditions existing a hundred years ago.

The proper person, and the only person, to instruct the child in matters of sex hygiene, is the parent. And in the case of very young children, the mother can do this much more tactfully, as a rule, than the father. The confidential relation existing between mother and child is the logical reason for this. For the subject is one that should be treated only in strictest confidence. And if the mother does not feel herself competent, she should seek advice from the family physician, and transmit her information to the child in her own way and as the proper opportunity presents itself.

Teachers, ministers, or doctors, should not be selected for this delicate task. For the instructions of such persons do not carry the same weight as those of the mother, and are less likely to be heeded. Moreover, the statements of an outsider

—the fact that any other person may broach the topic—detract from the sacred secrecy of the subject which Mother may refer to without arousing curiosity or apprehension, just as she may give instructions about other necessary bodily functions.

Determining the age at which the child should receive this essential instruction is important. Most parents deceive themselves in the belief that their little ones remain utterly unsophisticated until the age of puberty, at least. But this is not true in a majority of instances, and should not be so. For the period of puberty is the most important of the child's life; and if the little girl is ignorant of the natural and normal physical change that takes place at this time, she may receive a psychic shock, or be careless or indiscreet in the necessary physical precautions, that may have disastrous consequences.

We may make it a rule, therefore, that children should be instructed before the age of puberty. But this instruction should be of the most general character, avoiding all but absolutely essential details about natural biological functions, and cleanliness. Moreover, the subject should be carefully avoided after the initial instruction. For the child will remember every word that is told it in this connection, and frequent reference to the subject robs it of its confidential nature, and may result in unnatural and morbid curiosity.

Every father should warn his son against the pernicious "medical" advertisements published so widely for the purpose of frightening young men and bringing them into the merciless toils of unscrupulous quacks. These advertisements play upon the ignorance and credulity of the young men who may have committed some youthful and harmless indiscretion, by describing chimerical dangers, and professing to cure diseased conditions that do not exist.

Few persons, except physicians, realize the amount of positive harm and protracted unhappiness produced by this pernicious literature. The lives and usefulness of thousands of young men have been permanently blighted by these advertisements, to say nothing of the severe depletion of their pocket books.

The deplorable thing about the whole obnoxious subject is, that the claims and insinuations of these criminal charlatans which so many boys read and believe, are unmitigated lies. They play upon the boy's credulity by leading him to believe that a very common boyhood indiscretion—one that is so common that it may be considered almost a normal trait of youth—has blighted his life, or will do so unless he patronizes the perpetrators of the advertisement. Whereas physicians know that little harm comes from such indiscretion, which, in any event, is self-corrective.

Fathers should explain the nature of these ad-

vertisements to their boys. Or, if they feel that their word will not carry sufficient weight in this medical subject, they should arrange with the family physician to do so. In this way the boy will be given a correct understanding of many seeming mysteries, and rendered immune to the seductive literature of these discountenanced medical sharks.

Failing in this, the boy may go through life carrying a most oppressive burden—a closet skeleton that he would not reveal even to his most intimate friend. And this sort of closet skeleton is always a menace to mental stability.

II

Mild Forms of Disturbed Equilibrium

WE cannot hope to combat an evil without some knowledge of its nature. So before suggesting methods of stabilizing mental equilibrium, something should be said about the various conditions that influence stability, and the more tangible things that indicate a state of mental unbalance.

Needless to say the indications will not be exactly alike in any two cases, either in their course or their termination,—that is, in any condition which does not result in actual death. But in the main they follow fairly well-defined highways, all terminating in the condition included in the comprehensive term, insanity.

Unfortunately there are many derangements of personality which, if uncorrected, may result in this catastrophe. But if we can gain a clear conception of some of these premonitory conditions we shall have taken the most important step toward correcting them. For it must be borne in mind that although actual insanity is one of the most incurable conditions, in the initial stages when the mental balance is wavering on the bor-

derline before taking the final plunge, it may be prevented.

A recognition of this borderland state is our greatest safeguard; since, contrary to popular belief, insanity is seldom of sudden onset. Even in cases where the mental balance appears to have been unhinged by some sudden catastrophe, such as some great shock, grief, or fright, we find almost invariably that there have been indications of wavering equilibrium for some time—symptoms that an expert would recognize as danger signals. Moreover, the nature of those signals is usually such that even members of the victim's household would have recognized them, were the disease, insanity, as well understood as are many of the physical ailments.

So that we can say with all but absolute certainty that, short of actual physical injury, no mental or moral calamity will produce sudden insanity in a healthy-minded individual.

The effect of the *Titanic* disaster upon the mental condition of the survivors offers striking confirmation of this statement. There have been few catastrophes in modern times in which the survivors suffered greater mental and physical shock, and grief. To those unfamiliar with the causes of mental aberrations it seemed that few persons could pass through such an ordeal and retain their normal mentality. Indeed, the rumor that the incoming rescue ship, *Carpathia*, was " a

floating mad-house" became so persistent, that special arrangements were made to care for the insane in the receiving wards of the City hospitals.

Yet when the *Carpathia* arrived at her dock, not one of the *Titanic* survivors was insane. There were many bowed with grief, several disabled physically from exposure, or injury; but every one was normal mentally. Moreover, a canvas of these survivors a year later showed that no case of insanity had developed.

On the other hand, several neurotic persons on shore—persons having neither friends nor acquaintances on the doomed ship—became insane on hearing of the disaster. Yet in every one of these cases the individuals were flying signals of tottering mentality, and news of the great disaster simply acted as the spark to set off the mine already laid.

We are powerless to prevent a certain number of great calamities which result in terrible sacrifice of human life. But it is within our power to avert many of the mental disasters that follow in their wake.

Some Familiar Forms of Mental Instability

What particular form a mental aberration may take in any individual case is of far less importance for our present purpose than a survey of the premonitory shadows cast by the approaching

cloud. Bearing in mind that every disturbance of the emotions such as unnatural elation or depression, fear, worry, suspicions, or doubt, when exhibited to excess and without adequate cause is a stepping stone to actual insanity, let us consider somewhat in detail some of the peculiarities of mental aberrations with which every person should be somewhat familiar.

Without attempting to draw a fine distinction between actual insanity and closely allied states, we may examine some of the characteristics of certain abnormal conditions which closely resemble the more serious form, without necessarily merging into it. The one with which every person is more or less familiar, is hysteria.

Although the emotional manifestations of this disease, such as excessive and unrestrained laughter and weeping, are familiar to every one, these are only the better known signs of a subtle condition that may present a great diversity of symptoms. Instability of temper, a tendency to aimless dreaming, or an inclination to change from one task to another, whether work or play, characterizes the hysterical type of child. These children are given to exaggeration, and love to do startling and fantastic things, particularly in the presence of susceptible and gullible parents. They are often elated to a stage of ecstasy by trivial events, and are depressed correspondingly by trifling adversities.

As a rule they are untruthful and unreliable, are given to practicing deceptions, and lack the frankness that is characteristic of normal childhood. They are likely to be bright and precocious, frequently capricious about their food, and usually (though by no means always) of poor physical development.

These children have an abnormal craving for sympathy, and resort to all manner of subterfuges to obtain it. If their self-absorption takes a hypochondriacal form, they will simulate illnesses in every gradation of severity from a trifling cough to what appears to be actual paralysis and even convulsions,—conditions that keep the members of the sympathetic household dancing attendance. And invariably they receive this "danced attendance"; for even neuropathic children seldom develop severe hysteria except when surrounded by over-sympathetic, or foolishly indulgent, parents.

The hysterical type of woman differs very little in general characteristics from the hysterical child except in those differences common to the two periods of life. Indeed, most hysterical women have been hysterical children. These women are essentially childish in their attitudes of mind, and tend to reproduce the peculiarities shown in childhood, somewhat altered to fit the changed conditions. They demand the same attention of the members of their households, exhibit a want of

self-control, the tendency to impulsive actions, irritability of temper, and the craving for novelty and excitement. The basis of this condition is undoubtedly defective will-power; although this defect may be masked by a persistent stubbornness that gives the impression of extreme wilfulness, particularly to the members of their own households.

Their craving for sympathy is insatiable, and represents a type of selfishness, which, with the defective will-power, is a fundamental element of the condition. There is scarcely any limit to the length they will go to gain this sympathy. They have been known to mutilate themselves to the extent of producing serious injuries, starve themselves to the point of death, and simulate strange and puzzling symptoms that are easily mistaken for obscure pathological conditions. Every new disease that is described in the popular press is sure to be adopted by some of these patients. And it is remarkable how faithfully they will imitate in the minutest details symptoms that are unknown to most laymen. Little wonder, therefore, that they deceive sympathetic friends, and all too frequently the family doctor.

Perhaps the most common form of deception is a simulated paralysis in which the patient refuses to walk, becomes bedridden, and lies in bed for months, or years. Medical men have perfectly definite methods of detecting this deception; but

it is singularly difficult to convince the members of neuropathic households of the real state of affairs, even when the evidence is absolutely conclusive to others.

Some Radical Methods of Treatment

Sometimes a fortunate calamity is the means of revealing the deception, where mere medical science has failed. It has happened more than once that actual peril, such as the burning of a house, has stimulated the bedridden hysteric to use her perfectly good limbs to save her life in a manner that left no room for doubt about her actual condition. The " paralytic " who can move under the stimulus of danger is not suffering from true paralysis.

The subterfuges resorted to by the old-time physicians to " bring these peculiarly afflicted patients to their senses " are numberless. For our medical ancestors did not regard hysteria as a disease, but a mental state characterized by a " devilishly persistent obstinacy." Yet some of the methods of curing it were often most effective, even if much too hard and crude to appeal to our refined twentieth-century sensibilities.

The basis of these " cures " was the fact that sudden danger sometimes caused the hysterical paralytic to walk, demonstrating that the nervous and muscular mechanisms were intact, but in need

of proper stimulation. This naturally suggests a remedy, which has been utilized in one form or another many times, if we may believe popular traditions that have been handed down through generations of medical men.

One of the classic stories, which may well have a basis in fact, is that of a certain young woman who had been paralyzed and bedridden for many months despite the efforts of the half dozen physicians who were the medical scions of the small town in which she lived. Each of these physicians had been called successively to minister to the sufferer; each had reached the conclusion that the case was one of hysteria; and each had been indignantly dismissed as soon as he announced his decision to the family—illustrating the characteristic attitude of neuropathic families. When the sixth, and last, physician had been discharged the distracted father was at a loss to know where next to turn for assistance, since the list of available medical talent had been exhausted.

It happened that there was living in the town a retired physician, a decrepit old man who was still the medical oracle of the vicinity, although no longer able to minister to the sufferings of his worshipful townsmen on account of infirmity. As a court of last appeal the distraught father sought this venerable physician, and begged him for old time's sake to try his skill upon the bedridden victim.

The old physician, who was still in touch with the medical gossip of his confrères if not in active competition with them, was cognizant of the true nature of the form of "paralysis" with which the girl was afflicted. And deeply sympathetic with the distressed father, and probably somewhat impatient with the girl for her wilful selfishness, he finally agreed to take charge of her case. But only on this condition: He was to treat her in his own way, without interference from any relative, friend, or outsider.

The father thankfully agreed to this condition, and arranged for the treatments to begin the following morning. At the appointed hour, therefore, the old doctor appeared in the dooryard, driven there in a light wagon, in the back of which was a well-stuffed straw tick. This mysterious therapeutic implement was deposited in the front dooryard by his muscular assistant who had acted as driver, while the physician visited the patient.

Without wasting any time over unnecessary preliminaries, and disregarding the solicitous inquiries of the mystified father, the old doctor ordered the girl to get up. And when she protested her inability to do so, commanded her mother to dress her. "For I intend to have her take a little walk all by herself before I leave," the old man announced. After which he held a whispered conversation with the muscular driver, and returned with him to the sick-room when the dressing was

completed. At a nod from the doctor this assistant picked the girl up bodily, carried her into the yard, and deposited her on the straw tick. Then he took his station beside the agitated, and now thoroughly apprehensive father, while the doctor began his treatment.

The preliminary part of this treatment was a speech by the aged physician in which he explained matters very thoroughly to the astonished and highly indignant patient. He pointed out to her that her condition was purely imaginary, and that she could walk if she chose to do so; but since she was selfish, she preferred to stay in bed and keep her poor old father and mother waiting upon her, regardless of the fact that she was wrecking their lives and their fortunes.

"You have been fooling these poor old people long enough," the physician said, shaking his trembling finger at the bewildered patient; "but you can't fool everybody. I know you can walk if you care to, and I'm going to prove it right now."

With that the old man drew a match from his pocket, and lighted one corner of the straw tick.

"Now walk or burn," he commanded.

By this time the distressed father was thoroughly convinced that the old man had gone stark mad; and when the physician set fire to the mattress he was certain that he had consigned his daughter to the care of a maniac. Disregarding

his promises of yesterday, therefore, he sprang forward to rescue his suffering child from the flames and the impending disaster he had brought upon her. But he got no farther than the waiting embrace of the muscular driver, who pinned his arms and held his struggling prisoner at a safe distance from the blazing mattress. Meanwhile the good old mother, herself too feeble to effect the rescue, collapsed in a distracted heap on the door-step.

Thrown absolutely upon her own resources, with no alternative but to burn or run, the girl made the inevitable hysterical choice, sprang from the blazing couch and ran into the house—demonstrating conclusively that the old doctor had diagnosed her condition correctly.

The Secret of Miraculous Cures

Now in all probability this particular incident never occurred exactly as related here. Yet it is perfectly certain that if any one of these bedridden hysterics were placed on a blazing mattress, as this one is alleged to have been, she would suddenly regain the use of her limbs. But the defect of this method of treatment lies in the fact that "cures" attempted by it are usually only temporary. It would not necessarily change the victim's attitude of mind; and unless this were accomplished, she would presently develop some

other form of subtle malingering to deceive and distress her afflicted family. For this reason the modern physician does not resort to the crude expedients of his predecessors, but directs his efforts to getting at the basis of the malady, instead of striking at its peculiar manifestations.

Moreover, we know now that hysteria is an actual disease with definite pathological manifestations that may be easily demonstrated, such as areas of insensibility of the skin, and mucous surfaces, the existence of which is not suspected by the patient. Yet the condition is so closely dependent upon the patient's attitude of mind, that it is only by changing and correcting this attitude that permanent cures are effected. In proof of this, witness the number of "miraculous cures" effected by faith alone—the piles of crutches that psychic cripples have left at a hundred shrines when their will-powers have been strengthened by faith. The evidence is indisputable; but many people fail to interpret correctly the meaning of the seeming miracle.

We see these same miracles performed in a much less spectacular, although quite as effective a way, in sanitariums every day. And the secret of these cures is a perfectly open one—that of changing the patient's introspective trend of thought into better channels leading to a different and more rational attitude toward herself, thus strengthening the will-power. Such cures are

much more likely to be permanent than the temporary improvement produced by sudden frights, or kindred methods, because they reach the foundation of the difficulty, instead of merely touching a surface manifestation.

It should be said in extenuation of the selfishness that lies at the bottom of hysteria, that the condition is due partly to an inherited defect for which the patients cannot be justly blamed. Neither should they be censured, if their early training and environment have been such as to increase, rather than suppress, their hysterical tendencies. But no such exoneration can be given the parents who were responsible for this environment.

If these victims had been given proper training in childhood, and helpful surroundings, most of them would escape hysterical manifestations later. In short, the onus of responsibility for hysteria frequently rests with the relatives of the patient, rather than the patient herself. Nervous, hysterical parents produce hysterical offspring; the stable type do not. And this fact should be borne in mind by the members of every neurotic household in dealing with children, or adults, whose mental attitudes are directly influenced by environment.

Hysteria may have its origin in some forgotten shock or disagreeable experience of early childhood—a suppressed emotion of the subconscious

mental life, which still remains a source of disturbance. The course of development of every child is punctuated by these suppressed emotions; but in stable individuals these emotions remain dormant throughout life. In neuropathic children, however, they tend to assert themselves later. Yet even in such children they may be kept in a quiescent state by parents who exercise that highest form of mental hygiene usually characterized as "common sense." A similar course in mental hygiene will be just as effective in suppressing the tendency in the nervous individual later in life.

The point of interest in hysteria here is that it sometimes precedes and merges into a condition of actual insanity. And falling short of this, it may permanently blight an otherwise useful life, which a little intelligent direction might have saved.

The Physical Effects of Worry

Another condition which has become very common in recent years, is that symptom of mental and nervous exhaustion which we call neurasthenia. Many persons suppose that this condition is merely a form of hysteria. But such is not the case.

The great difference in the two conditions is that hysteria may be the result of a forgotten

shock, *plus* a neuropathic make-up; while neurasthenia is usually the result of conscious worry accompanying, or producing, brain fatigue. This brain-fatigue may be the result of an actual illness, although it is more likely to follow overwork with the accompanying factor, worry. It should be added, also, that most sufferers from neurasthenia have a highly developed, sensitive, and somewhat unstable nervous organization.

I have emphasized the element, worry, as a factor in producing neurasthenia, because I believe that it is this, rather than overwork, that is largely responsible. Indeed, if we eliminate those cases of neurasthenia which come as the direct result of some organic illness, we find that mental agitation is responsible for practically all cases.

When we consider the mechanisms by which physical and mental work is performed we find the explanation of why either of these factors separately, or both of them together, without the added element, worry, are unlikely to produce more than temporary neurasthenic conditions. The amount of work that our muscular systems can perform is limited by the muscles themselves. When a certain stage of exhaustion is reached the muscle refuses to contract, no matter how much we may "will" it to do so. We can, by sheer force of will-power, drive it up to a certain point—much farther than is desirable, frequently—but there is a fixed limit beyond which it cannot be

driven. And when this point is reached the muscle stops acting, to rest and recuperate.

The point of limitation is just as clearly defined in the mental mechanism as in the muscle, although less patently so. The muscle rests itself by actually stopping the contraction of its fibres; while the mind, which is normally active in one of a thousand ways during every moment of consciousness, finds means of resting any overworked portion of its structure by throwing into activity some other less fatigued portion. And this process of mental resting by shifting the "center" of activity is beyond the control of the will.

Most persons have had illustrations of this when performing some task which required protracted and concentrated mental effort. After a certain number of hours of work, varying of course in different individuals, the mind tends to wander from the task in hand, and it requires constant effort of the will to keep the attention focussed. For a time it is possible to do so, if one is accustomed to concentrated mental effort. But presently a stage of exhaustion is reached in which the mind absolutely refuses to "stick to the subject"—goes skylarking off into some other channel of thought. It has, in short, called off the work in hand for the time being, and is resting itself by wandering into fields where the constellations of brain cells are less exhausted.

Thus the brain has its own insistent method of

recuperation even in our waking hours, and will take its modicum of rest whether we will or no. This mental safety-valve makes it practically impossible to injure the brain with work. And experience shows that hard work alone, or even a combination of mental and physical exertion of the most strenuous kind, seldom cause a mental breakdown.

But when we add the additional factor, worry, we form a combination that spells disaster. For the brain is incapable of automatically switching off this tormentor, as it does legitimate work. Indeed the brain that is exhausted by work seems to offer a particularly fertile field for the invader. Restful sleep does not come. Disturbing, half waking dreams, keep the brain active during the night, and daylight finds an exhausted nervous system that should be fully recuperated.

This condition of exhaustion may be demonstrated in the changed structure of the brain cells themselves. It is found that such things as shock, grief, fright, worry, and work, both muscular and mental, produce a degenerative change in the brain cells that may be demonstrated microscopically—an actual wearing out of the tissues. Rest, even for a very short period, replenishes this waste, as shown in the restored brain cells. But if these cells are kept in a constant state of exhaustion by worry, they are given no chance for recuperation, and a mental breakdown may result.

The Penalty of Mental Agitation

We hear constantly of "nervous prostrations" from overwork. Students break down from over-study; business men collapse under the strain of excessive work; and women succumb to social activities. But in every case, practically without exception, it is the insidious element, worry, that causes the collapse. And so there is full justification for the old adage that, "Work kills no man, Worry many."

In no field of mental derangement is this better illustrated than in neurasthenia. And in this term we include every gradation between mere mental waverings and complete prostrations. The disease is, indeed, the penalty and product of our modern strenuous methods of life, in which mental agitation is a conspicuous element.

Nearly every person who is subjected to prolonged mental application with attendant worries suffers from neurasthenic symptoms temporarily. But this state of transient mental fatigue cannot be considered as true neurasthenia. Even in highly organized, emotional individuals, this condition is usually self-corrective, unless accompanied by some exhausting physical disease.

True neurasthenia is likely to begin with prolonged periods of insomnia, which may alternate with periods of unrefreshing sleep. The sufferer feels dull, and lacks energy on arising, his general

condition improving as the day advances—a condition almost pathognomonic of debility. He notices, also, that his memory is dulled for recent events, and he finds difficulty in concentrating his thoughts. Frequently after reading a page he finds that he has not understood a line, his thoughts having gone wool-gathering while his eyes scanned the words. He reads the page again —re-reads it several times, perhaps—but is unable to fix his attention upon the subject after the first few lines.

Obviously his mentality is below par; and this condition becomes at once a source of worriment, and apprehensive introspection. He begins to dread the tasks which were formerly routine day-duties for him, and to doubt his ability to perform them. Little things irritate and annoy him unduly, and his usual cheerfulness may be replaced by moody melancholy. In some cases marked irresolution, hesitation, and lack of will-power are characteristic. The victim is harassed by indecision over trifling matters. He cannot decide what suit or tie he shall wear, which train he will catch to town, and doubts his ability to take the train at all once he has reached the station.

He may be obsessed with the idea that he will make mistakes in his work, and makes mountains out of a hundred and one little mole-hills that are sure to be encountered in his everyday employments. Thus he is worried about his mental con-

dition; and in the wake of these obsessions comes the inevitable worry over bodily ailments.

One of the early symptoms of this disorder is a loss of appetite, and also a disinclination to take sufficient quantities of liquids. The neurasthenic seldom seeks relief from his troubles in drink. And thus he is deprived of the three elements necessary to repair his organism and restore his lost energy,—foods, liquids, and sleep. The result is a deranged digestive tract added to a weakened nervous system. The sufferer is indeed ill, physically as well as mentally.

The chain of morbid symptoms exhibited by these hypochondriacal persons, while differing in each individual, of course, follows fairly well-defined trends of thought in most cases. Some of them have a dread of open places (agoraphobia), such as an open square or city street; others fear enclosed places (claustrophobia), such as a car, or room, with the doors closed. In some the dread of a particular disease such as cancer, appendicitis, or tuberculosis predominates; or they cannot bear noises such as the rustling of paper, or have a morbid fear of cats, dogs, or horses. Indeed, if we were simply to catalogue the names of the morbid "phobias," the list would fill many pages. It would require a vivid imagination to conceive any form of "phobia" that has not been exhibited by this type of sufferer at one time or another.

As we shall see in another place, many of these

Hogarth's "Bedlam"

Patients' Tea Party in a State Hospital

THE OLD VS THE NEW

peculiarities are characteristic of certain forms of actual insanity. And no one will question the abnormal mental condition of a man who has changed from a vigorous, active, clear thinker, to one who spends hours in deciding what suit he shall wear, turns pale if the family cat enters his room, fears to cross a street he has crossed a thousand times, cannot trust himself to sign his name, and firmly believes that he is stricken with tuberculosis although assured to the contrary by trusted medical advisers. He is abnormal, manifestly; and he is dangerously near the borderline. But in several ways he differs from the man actually insane. He is still amenable to reason, at least temporarily, still hopes to recover, and wishes sympathy. Whereas the person actually insane is not open to reason, is past caring for sympathy, and neither desires nor hopes for recovery.

The importance of this condition from our present point of view is (1) that it may merge into actual insanity; (2) even in its worst forms it is curable; and (3) it is a condition which may be prevented by proper mental discipline. In any event, it should not be regarded as a purely imaginary illness, even though it is frequently a condition so closely dependent upon the mental state that it may be cured by rigid mental, and physical hygiene, without the aid of medication. The method of applying this mental discipline will be suggested in a later chapter.

III

Danger Signals

UNDOUBTEDLY the least understood of all diseases among the generality of people is insanity, or what the modern alienist refers to as the psychoses. Every intelligent person has a fair degree of more or less accurate knowledge about the symptoms of quite an imposing array of other diseases. It is a part of common knowledge to know the symptoms of threatening throat, lung, and intestinal troubles, and among better informed persons there is a fair understanding of the more obscure maladies, such as those involving the internal organs, and even the nervous system.

But there are few persons indeed who have any true conception of insanity itself, or what the symptoms leading up to this calamity may be like. And yet the importance of such knowledge can hardly be overestimated. There are few diseases that give such prolonged premonitory warnings of its approach, or in which the early recognition of these symptoms is of such vital importance. For despite the fact that the causes, symptoms,

and course of mental diseases are well understood by the modern physician, the methods of treating these diseases, once they have become established, are scarcely more effective now than in the days of our grandfathers.

Our chief defence against insanity, then, like contagious diseases, is prevention. But this defence, to be successful, cannot be left to medical officers, or quarantine laws alone, but requires the coöperation of all intelligent laymen. For we cannot exclude this pestilence by shutting the gates of a city, or closing a few ports of entry, since there are " foci of infections " in every city, village, and countryside. To suppress these foci we must learn to recognize certain premonitory symptoms that indicate their existence, just as we have learned to recognize the important symptoms of incipient bodily ailments.

For this purpose it is not necessary that the intelligent observer should possess an accurate knowledge of the varied forms of insanity, but rather the general character of the more pronounced symptoms. He must, first of all, remember that insanity is a disease, or group of diseases, that affect personality—a certain definite change in conduct, which, in the beginning, may depart very little from the normal conduct of the individual.

Adjustment to Social Environment

"Speaking in a broad, general way," says Dr. M. S. Gregory, "mental health may be defined as the ability of the individual to adjust himself to his social environment. By this, I mean his ability to adapt himself to society, its customs and conventions—the social fabric in which he lives and of which he is a part. Mental life thus consists of a continuous process of adjustment, and the measure of mental health of an individual is directly proportionate to his ability to adapt himself to his social environment.

"However, we are not born equal. Many come into the world burdened with traits, tendencies, and defects which seriously impair their power of adjustment; while others, in addition to a vicious heritage, have the still greater misfortune of being exposed to faulty and unfavorable environmental factors which accentuate their inherent defects and tendencies, thus completely depriving them of the ability to adjust themselves.

"Some suffer maladjustment by reason of faulty habits—mental and physical; by misunderstandings of themselves and their relations to others. Many of us have desires, longings, and ambitions which must be repressed and suppressed, as they cannot be gratified, but nevertheless make our adaptation to our social environment extremely difficult. Intellectual or social

adjustment is obviously more difficult than physical, because the elemental factors of mental life are more complex and variable.

"As in the case of physical life, one meets with all gradations of maladjustment from total disability to slight deviation. Thus among those wholly unable to adjust themselves are found the imbeciles, idiots, and profoundly demented. These require segregation and an institutional life. In lesser degree, we find the weak-minded, and some types of chronic insane who show some slight power of adjustment. Another class includes those who have a higher but still incomplete degree of adjustment—such as in epilepsy or the recurrent mental disturbances. Another large group comprises those who are capable of complete adjustment with assistance, such as neuroses, neurasthenics, psychopathics, alcoholics, and so-called nervous people. Finally, we might mention persons who are odd, eccentric, have the so-called artistic temperament, who show only a very slight degree of maladjustment."

In a general way we may group the symptoms of approaching, or threatened, mental derangement in two grand divisions—those in which there is abnormal depression, or those exhibiting the opposite condition of abnormal excitement, or exaltation.

The Significance of Mental Depression

Unreasonable or unusual depression, particularly in a person of nervous temperament, should be regarded with suspicion, always remembering that fleeting feelings of depression are experienced by every normal person. But when the feeling of depression persists, and is accompanied by loss of appetite, failing nutrition, and sleeplessness, it should be regarded with apprehension, particularly in persons of usually buoyant spirits. Great grief, or distress, will, of course, produce depression in every normal individual; but in the case of persons with stable equilibrium this is naturally and normally mitigated, and the usual state of buoyancy restored by new interests and aspirations. In this manner the mind adjusts itself to its new surroundings. There has been a definite cause for the depression, and a normal, healthy reaction from it.

But the beginning of the form of depression which may develop into actual melancholia is frequently more insidious. Trifling annoyances about household duties or business matters produce needless worries; the sufferer seeks seclusion, loses interest in work or is disinclined to work at all, and does not indulge in his ordinary recreations. He is alert and irritable with those about him at times; but, in general, his actions are slower than formerly, and it is apparent that his

mind works with corresponding tardiness and difficulty.

His intellect is still intact, but the flow of thought is noticeably retarded, and his whole attitude is one of dull apathy. More than likely he will become careless about his dress and appearance—a most significant symptom. And as there is a sluggishness of bodily functions, he is likely to have digestive disturbances.

If the person showing these symptoms has bitherto been of cheerful, buoyant disposition, the change in his condition is quickly noticed. This change is less apparent in those who are naturally quiet, reserved, or seclusive. Yet in either case the symptoms are important danger signals which demand active interference and correction if the sufferer is to be saved from actual insanity. If such correction is undertaken at once, however, the chances for recovery without any perceptible mental deterioration are favorable.

We need not, for our purpose here, picture the next stage of mental deterioration. But it is of vital importance to know that at this initial stage, if the patient is given proper surroundings, with the right kind of physical and mental hygiene, that the graver calamity can be averted in a majority of cases.

It should not be understood that all cases of incipient melancholia exhibit the symptoms of approaching derangement in the order just out-

lined. In some instances peculiar delusions and hallucinations manifest themselves early in the attack. The sufferer may believe that he has perpetrated frauds, ruined his health, betrayed his friends, or committed an unpardonable sin for which there is no hope of forgiveness. Or he may fancy that he sees disagreeable sights, is convinced that all the food offered him is poisoned, or hears voices calling to him, commands from the Deity, or temptations by the devil. In this state of hopeless distress he may commit suicide or attempt the destruction of the members of his family "to save them"—an example of the illogicality of his distorted reason.

But when any of these symptoms are exhibited early in the attack, although they indicate a condition less favorable to ultimate recovery, they usually attract the attention of the friends, and thus insure early, and perhaps curative treatment.

Brain Cells That Are too Active

Curiously enough a condition similar to the one just described sometimes alternates with one in which the main symptoms both physical and mental are of an exactly opposite type. Exaggerated bodily activity, exalted feelings of euphoria, and a rapid flow of ideas rather than a retarded train of thought, are the curtain raisers for the tragedy.

These may be simply an exaggeration of a normal condition, and if so are likely to remain unnoticed for a longer time. The patient is verbose and talks in a mildly exalted manner to every one about him; he is ceaselessly active, busying himself with trifles and dabbling in first one thing and then another, writing numerous letters on unimportant subjects to chance acquaintances, changing rapidly from one diversion to another, making witty remarks, puns, and jests, retailing funny anecdotes, and showing a sense of well-being not unlike the general effects of mild alcoholic intoxication. Indeed this condition is frequently mistaken for mild inebriety, particularly in those who are addicted to alcoholic excesses.

These patients exhibit also peculiar irritability and petty animosities, sometimes seeking controversies without provocation or reason; and almost invariably they exhibit peculiarly resistant insomnia.

The condition is, indeed, a true "intoxication" in the medical sense. But it should be borne in mind that this kind of intoxication differs from that produced by alcohol or drugs in that it never begins or ceases suddenly. Almost invariably the person shows slight abnormalities for some time without arousing the suspicion, or apprehension, of his friends. And curiously enough the general character of this initial abnormality is usually

that of mental depression—precisely the opposite condition to the one now exhibited.

The immediate friends will frequently recall that the sufferer had been given to brooding for some time, and in many ways has shown gradually increasing inaptitude or incapacity for work. They may have observed, also, a tendency to revert to a condition of depression (which is generally far less pronounced than in actual melancholia), after a certain period of the exalted condition just described. Indeed, alternation of these two conditions is characteristic of certain forms of insanity.

The mild condition of exaltation, or depression, just described is only the prelude to the more serious catastrophe. But from our present point of view it is by far the most important stage. For in this condition, which at worst should only be regarded as a state of hypomanic excitement, rather than actual insanity, the case is amenable to curative treatment.

It is peculiarly desirable, therefore, that every person should have a reasonably clear working knowledge of the significance of these danger signals, and realize the importance of heeding their warnings before it is too late. We need not picture the symptoms of the later stage. The frenzy of the maniac has been so frequently described in every field of literature that it is familiar to every one. Once this stage is reached

the mental hygiene of the home is entirely inadequate. So also, we admit regretfully, is any other known form of treatment in a vast majority of cases.

One of these two conditions of exaltation or depression with their somewhat characteristic premonitory signals of mental waverings, characterize the initial stages of the majority of mental aberrations. There are other forms, however, in which the signals are so obscure, or that are so closely akin to temporary exaggeration in normal mental states, that they are less likely to be recognized.

It was said a moment ago that persons who are odd, eccentric, and have so-called "artistic temperament," frequently show a mild degree of maladjustment to their surroundings. We may, indeed, make the statement somewhat more comprehensive. Persons who develop that peculiar form of mental aberration called paranoia,—the class from which the calculating assassins are drawn—have usually been odd, eccentric, or "temperamental" from childhood. Knowing this, it is readily understood why any parent who encourages eccentricity in his child, or any adult who purposely exaggerates or fails to restrain his own eccentricities, is courting ultimate disaster.

The Significance of Eccentricities

The man who goes bare-headed in societies where the custom of wearing hats is universal; the man who wears flowing locks in cropped haired communities; the freak who dresses in Greek robes, or goes barefooted in a leather-shod world —each of these is treading a dangerously narrow borderline. For such unusual actions of nonconformity demonstrate an exaggerated egoism—a false estimate of one's own importance and maladjustment to surroundings, that keeps the trend of mentality in the general direction of the asylum. I say asylum, rather than hospital: for no case of true paranoia ever recovers.

This disease is the result of delusions acting on a mind having a constitutional taint—an inheritance that may have been developed by bad training in childhood. Yet paranoiacs are frequently persons of unusual intelligence. They are the victims of delusions that tend to become systematized—that is, the delusions arrange themselves sequentially in support of a fixed idea, in a manner that can be logically explained by the victim, although obviously grotesque to others. Unfortunately, this idea is usually unpleasant in character, a delusion of persecution.

The disease is likely to begin about the time of puberty, and as its development is slow, may not be detected for several years. A very com-

mon symptom in the beginning is a suspicion on the part of the victim that there is something queer in his personal appearance, and that people stare at him. He imagines that persons who pass him, turn and look at him, and he suspects that groups of persons are talking about him, criticising, and later, plotting against him.

He is unhappy, and feels himself out of harmony with his surroundings and fellow men. He feels that "he is not understood"; and frequently his idioscyncrasies are mistaken for marks of genius. And so they may be. But these "misunderstood" individuals are much more likely to be paranoiacs than genuises.

Unlike the unhappy melancholiac who blames himself for his unhappiness, the paranoiac blames others for his misfortune. To the melancholiac the world is right, himself wrong: to the paranoiac the world is all at fault.

With this attitude of mind, then, he sees things in strange relations. For that matter, so does genius. But the genius proves his title by turning his unusual insight to practical account, while the visions of the paranoiac come to nothing except disaster.

The mind of the paranoiac is clear, and may be even brilliant. Thus the disease is not one of clouded intellect as in some other forms of aberration, but rather a condition of faulty judgment. Frequently these paranoiacs show great logicality

in reasoning from certain premises on many subjects; but their shortcomings lie in their false judgment of themselves, and their abnormal suspicion of the motives of others.

A few years ago I witnessed a series of amusing episodes which illustrate the characteristic paranoiac attitude of mind. Two farmers of my acquaintance were joint owners of a valuable stallion. One of these men was a typical hard-headed Yankee, the other a man with a distinctly paranoid type of mind. As some disagreement had arisen about the care of the animal, the paranoiac-partner offered to sell his share in the horse.

The Yankee considered the proposition for a few minutes, and then expressed his willingness to buy, offering two hundred and fifty dollars for his partner's share.

Now this was a perfectly fair valuation, and an amount that the other partner would have been glad to accept—until it was offered. But the moment his partner expressed his willingness to buy he became suspicious. He reasoned thus: This man has made me the offer because he knows that he can sell the horse for more. Why should I not get the benefit of this profit, too? My partner is trying to cheat me.

All this, be it understood, was not thought out on the spur of the moment, but after several days of careful consideration. Then he sought his

partner and flatly refused the offer, intimating his reason for refusing.

"Very well, then," said the partner, "I'll *sell* you my half interest for two hundred and fifty dollars."

A chance to buy was the very thing that the suspicious partner was now seeking. But the moment the chance was offered he demurred. After all, he thought, his partner would not be so anxious to sell unless there was some very good reason for doing so. Something was wrong with the horse; or the former offer to buy was simply a blind to wheedle him into buying instead of selling. And so, after brooding over the matter for a day or two he decided not to buy, just as he had decided not to sell.

Now in a general way the reasoning of this suspicious partner was closely similar to the usual circumspection necessary to carry out any careful business transaction. But the subsequent events showed that the suspicious partner's attitude of mind was abnormal. For at the end of three years of intermittent haggling back and forth, during which time almost every conceivable kind of give-or-take offer was made and refused, there had been no change in ownership of the horse. Then the animal itself settled the matter by dying of pneumonia.

The Goal of False Suspicions

The characteristic thing about this paranoiac's attitude was that his arguments were perfectly logical, and might very well be founded on facts. This attitude of mind typifies paranoia in the beginning; frequently the delusions of persecution are founded on facts. But in cases in which the disease is destined to develop into paranoid insanity, this need not be so, and frequently is not. Many of the fancied wrongs are of a purely imaginary nature, perhaps a single focus in the beginning. But by adding and magnifying one fact here, and another there, always giving it the " squint " that makes it fit into the general scheme of persecuting thought, the paranoiac weaves an unbroken chain of evidence to support his false premise.

The danger mark in true paranoia is when hallucinations make their appearance, hallucinations that usually manifest themselves as imaginary voices almost without exception threatening, or bidding the patient do some violent deed. Thus the voices may seem to come from enemies, or may come as messages from God commanding the death of a king, or a president. In either event they are likely to result in violence, such as the assassinations of a Garfield, a McKinley, or a King Humbert. Yet the overt act seems entirely justifiable to the paranoiac, to whom the hallucinatory voices are absolutely real.

It does not follow, of course, that every paranoiac who has delusions of persecution, as practically all of them do, will eventually commit some violence. There are many of these unfortunates who bear a cross, not a weapon. But there is always danger that the burden of the cross may become intolerable, and a spirit of revenge replace the one of humble submission.

It is important to remember that the signs of approaching, or threatened, paranoia are frequently apparent to the immediate relatives and friends of the afflicted person long before an outsider, unfamiliar with his normal conduct, would suspect it. When such symptoms are detected, active measures should be taken immediately to try and correct them; for if the disease progressed to the stage of hallucinations, it is practically impossible to check its progress.

Despite the fact that the violent paranoiac is the most dangerous type of lunatic because of his logicality and apparent normality of thought, a vast majority of the milder types of paranoiacs remain at large in their communities. Frequently they are regarded as queer or eccentric persons. Many of them are unable to hold positions for any length of time, because they believe that their associates persecute them in various petty ways. They imagine that their mail is tampered with, that other employés complain of them to their employers; or they suspect that misplaced articles

have been purposely concealed to annoy them. Sooner or later they take their troubles to their employers; and frequently the reassurance they receive quiets their suspicions for the moment. For the paranoid type of person usually performs his tasks with great proficiency; and for this reason is likely to be in good standing with those for whom he works. But the effect of the employer's reassurance soon wears away, the ideas of persecution again dominate the diseased mind, and in the end the paranoiac leaves his position and seeks employment elsewhere.

Of course his persecutors do not confine their efforts to his place of business, but carry their activities to the home or boarding-house of the victim, and follow him to his new place of employment. He sees evidences of their influence in his places of amusement and on the street, in the hundred and one petty annoyances of everyday life. And so the unfortunate goes about in an atmosphere charged with dismal suspicions—a maze of tangled mysteries which center about himself. These are the men who are forever in litigation—righteous litigation in every instance in their honest opinions. And these are the patients who, when committed to the asylums, secure habeas corpus hearings, conduct their own cases in court, and are forever convincing lay jurors that they are sane and should be liberated because of their ability to reason with such apparent logicality.

Eventually they drift back into the insane hospitals again; but unfortunately this return may be deferred until their delusions have driven them to commit some frightful crime. In that event it is often the electric chair, rather than the asylum, that closes the dismal chapter.

The less pronounced types wander from one place of employment to another, and from one place of abode to another, always seeking to evade their persecutors, but forever finding them haunting each new environment. As a rule they are great faddists; and this faddishness may be the first symptom that excites suspicion of their mental abnormality.

Narcotics and Mental Stability

There is one quite common danger signal indicative of a somewhat unstable nervous make-up that every individual can gauge, and should heed. This is the effects of alcohol. Persons who are abnormally sensitive to small quantities of alcoholic drinks have less stable mental equilibrium than those who are not affected by reasonable potations. And persons of this peculiarly sensitive type should avoid alcohol in every form, and should practice mental hygiene, at least to the extent of avoiding the better known dangers to mental equilibrium, such as bursts of anger, brooding, and tendencies to despondency, or excesses of

any kind. For their idiosyncrasy is most significant.

Besides these individuals, there are many persons whose inherent mental tendencies may be judged by the effect that alcohol produces upon them. In a general way, all persons fall into one of two classes. One of these includes the persons in whom alcohol produces an extreme degree of exhilaration—who become "crazy," and entirely irresponsible after a few drinks. The other (and a far larger class, I believe) do not experience the same exhilaration, even with copious imbibitions —cannot, in short, "drive away all care" with liquor.

Of these two types, the person who is more easily affected and becomes highly exhilarated by alcohol, is likely to be of a more unstable, or neuropathic make-up. This is shown in another way. Such persons are much more likely to become addicted to drugs, since drugs have the same peculiarly exhilarating effects upon them. The type of person not unduly exalted or excited by alcohol is usually more phlegmatic and more stably balanced, and less likely to become the victims of narcotics.

There is one hopeless form of mental aberration for which no curative treatment can be given, even if the initial symptoms are detected early. This form of insanity is called paresis. The course of this disease is usually rapid, and death inevitable

within a comparatively short time. But, even though a detection of the early symptoms will not avert the ultimate calamity, it is highly important that such symptoms be recognized, since these patients tend to do things that are likely to bring disaster upon their households as well as themselves.

It seems paradoxical that this most incurable form of mental aberration is the most preventable —is, indeed, the result of the specific disease, syphilis. But fortunately it does not develop as a common sequence of this infection, although there is every reason to believe that there is no case of paresis that is not preceded by syphilis, either hereditary or acquired. Not every person who has contracted, or inherited, a specific infection—perhaps not over one in one hundred—will become paretic. And in any event, even the initial symptoms of this disease will not appear until several years after the specific disorder.

"The most suspicious of all circumstances, which may indicate the inception of general paralysis (paresis)," says Hollander, "is a gradual but obvious alteration in the mental characteristics of the individual." There may be also an alteration in the patient's physical system which may give definite indications of disease quite as pronounced as the mental symptoms.

The most frequent and characteristic mental change is a general state of mild exhilaration,

quite unlike the patient's usual state of mind. He expresses himself as being in perfect health—never felt better in his life. And the expression of his face shows a pleased satisfaction with himself, which may continue for months without other very pronounced mental changes. Meanwhile, however, his family may have noticed that some peculiar and entirely unusual physical symptoms have developed. There are tremors of the lips and tongue, with accompanying difficulties in speech when attempting to pronounce certain words, and the handwriting may change entirely and become almost illegible. The patient is likely to be irritable over small matters, make unusual demands of those about him, and whimsical about his food. Yet all this time he asserts insistently that he is feeling better than ever before.

This feeling of well-being, which characterizes most cases, does not always accompany the other symptoms. Some paretics are depressed; and even the elated states are likely to be interspersed with periods of depression, or moroseness. But the physical symptoms are fairly constant, and even the tremulous, depressed patient may have delusions of grandeur completely subversive of his physical condition. He asserts that he is the strongest man in the world, the most skilful, and the richest, even though penniless and infirm.

It is a peculiar feature of the early symptoms

of this disease that the patients are likely to enter into extravagant business ventures, which leave their families penniless later on. They are prone to conceive stupendous undertakings, such as buying or manufacturing articles on an enormous scale. And, if they have been successful in business ventures hitherto, the visionary nature of these schemes may escape detection, until too late to avert the fatal crash and resultant ruin.

The moral sense is usually dulled rather early in the disease. The patient may perpetrate frauds, or actually steal things for which he has no use; and detection causes him no remorse. Eventually he becomes careless of his personal appearance, and in his deportment, even though formerly most exemplary in such matters. But by the time this stage is reached his mental abnormality will certainly have been detected. Let us hope that this detection has not been delayed until this doomed man has dragged his friends into ruin with him!

Some of the visionary schemes of these paretics are presented with such logicality, that they defy controversion except by the dictum of common sense. I knew one patient who conceived a gigantic scheme for making a million dollars yearly profit by raising "white navy beans." Beans would bring one dollar a bushel; an acre of ground will produce two bushels; the cost of production is not over one dollar per acre. Ergo: rent a million

acres of ground, raise two million bushels of beans at a cost of one million dollars; sell the crop for two millions; and clear a million. What could be simpler!

Stated thus, the scheme is too obviously grotesque for consideration. But as presented by the patient it was most convincing. For he could give a logical explanation to every possible objection, or apparent obstacle, and meet them with an array of figures seemingly unanswerable. Some less patently fantastic, but no less visionary scheme, has brought financial ruin upon many a paretic and his unsuspecting friends.

Transient Mental Waverings

Closely allied to the insane states, and frequently merging into them, are abnormal mental conditions which, in their milder manifestations, have been experienced by every one. I refer to perverse obsessions, such as a desire to do, or say, things suggsted by some compelling impulse—imperative conceptions, as they are called. The normal mind resists such impulses. But neuropathic persons sometimes find great difficulty in suppressing them, particularly when in a state of high nervous tension, or exhaustion.

A recent writer on this subject describes these persons as " feeling an irresistible desire to tell persons they see to do some harm; if they see a child, to tell it to break things or set the place

on fire. Ruffianly looking men give rise to the desire to tell them to kill or to do some harm. These imperative conceptions are often associated with a feeling of doubt as to their having performed some act; thus they often doubt if they had told these persons to do harm.''

These are the words of a modern psychiatrist. But nearly three quarters of a century ago this condition was described by a writer of fiction in a manner that leaves no room for improvement. The description occurs in Hawthorne's *Scarlet Letter*, and shows the author's marvelous insight into the abnormalities of the human mind. Few physicians in Hawthorne's time had any such clear understanding of this peculiar mental phenomenon: none to-day has any better. Indeed the terse description given above could have been drawn from Hawthorne's masterful delineation.

The incident in the *Scarlet Letter* which inspired this description is the one in which the erring, but unsuspected and revered minister, Mr. Dimmesdale, has just reached the determination to throw off the oppressive secret yoke that had shattered his body and set his mind tottering.

"At every step he was incited to do some strange, wild, wicked thing or other," runs the description, "with a sense that it would be at once involuntary and intentional, in spite of himself, yet growing out of a profounder self than that which opposed the impulse. For instance, he

met one of the deacons. The good old man addressed him with the paternal affection and patriarchal privilege which his venerable age, his upright and holy character, and his station in the church, entitled him to use; and, conjoined with this, the deep, almost worshipping respect, which the minister's professional and private claims alike demanded. Never was there a more beautiful example of how the majesty of age and wisdom may comport with the obeisance and respect enjoined upon it, as from a lower social rank, and inferior order of endowment, towards a higher.

"Now, during a conversation of some two or three moments between the Reverend Mr. Dimmesdale and this excellent and hoary-bearded deacon, it was only by the most careful self-control that the former could refrain from uttering certain blasphemous suggestions that rose into his mind, respecting the communion supper. He absolutely trembled and turned pale as ashes, lest his tongue should wag itself in utterance of these horrible matters, and plead his own consent for so doing, without his having fairly given it. And, even with this terror in his heart, he could hardly avoid laughing, to imagine how the sanctified old patriarchal deacon would have been petrified by his minister's impiety.

"Again, another incident of the same nature. Hurrying along the street, the Reverend Mr. Dimmesdale encountered the oldest female member of

his church, a most pious and exemplary old dame, poor, widowed, lonely, and with a heart as full of reminiscences about her dead husband and children, and her dead friends of long ago, as a burial-ground is full of storied gravestones. Yet all this, which would else have been such heavy sorrow, was made almost a solemn joy to her devout old soul, by religious consolations of the truth of the Scripture, wherewith she had fed herself continually for more than thirty years. And since Mr. Dimmesdale had taken charge, the good grandam's chief earthly comfort—which, unless it had been likewise heavenly comfort, could have been none at all—was to meet her pastor, whether casually, or of set purpose, and be refreshed with a word of warm, fragrant, heaven-breathing Gospel truth, from his beloved lips, into her dulled, but rapturously attentive ear.

"But, on this occasion, up to the moment of putting his lips to the old woman's ear, Mr. Dimmesdale, as the great enemy of souls would have it, could recall no text of Scripture, nor aught else, except in brief, pithy, and, as it appeared to him, unanswerable argument against the immortality of the human soul. The instillment thereof into her mind would probably have caused this aged sister to drop down dead, at once, as by the effect of an intensely poisonous infusion. What he really did whisper, the minister could never afterwards recollect. There was, perhaps, a fortunate dis-

order of his utterance, which failed to impart any distinct idea to the good widow's comprehension, or which Providence interpreted after a method of its own. Assuredly, as the minister looked back, he beheld an expression of divine gratitude and ecstasy that seemed like the shine of the celestial city on her face, so wrinkled and ashy pale."

Some similar attitude of mind, in a less exaggerated form,—some imperative conception, in one form or another—is likely to obsess the highly strung, over-wrought normal person. It is usually suppressed and soon forgotten. But it is a danger signal—a red light signal of impending disaster, if you please—which should be heeded and corrected. Yet unlike many of the others just enumerated, its detection and correction rest almost exclusively with the individual himself. His actions may finally reveal his obsessions to his friends; but the time for correction is before this—before his mentality succumbs to such a degree that he cannot resist acting on the impulse created by the impelling thoughts.

IV

Nourishing the Mind

AMERICA is a country of enthusiasts. And enthusiasm is undoubtedly a valuable national asset. But great enthusiasm about too many subjects indicates a somewhat faulty judgment in many instances—a type of credulity that leads to the chasing of one phantom after another without any very definite accomplishment.

There is no nation in the world that has so little cause to worry over what it eats as our own; yet no country is so obsessed with diet-fads. Breakfast-food fads, and chewing fads, carry us off our feet in mad enthusiasm—at least until some other tempting fad crosses our path, and turns us into fresh channels of pursuit.

Fortunately for ourselves we are not persistent in our fad-chasing, so that no great amount of harm results from our escapades. Indeed most of the fads are so innocuous in themselves that they would do little harm if pursued persistently. But occasionally one is created that would prove disastrous to its votaries if pursued too persistently.

Some one has said, and with a great deal of truth, that if " they [the food faddists] were not

busy chasing one fad they would be busy chasing another." They are, in short, faddists chronically, and by nature. But the recent episodes in our last-but-one-or-two eating fads, "Fletcherism," demonstrates that few persons are entirely immune to the influence of well-aimed faddism. For this fad draws a horde of usually well-balanced persons into the vortex temporarily—persons who should have known that any fad which attempts to overthrow established customs in eating, sleeping, or clothing ourselves by radical changes in methods, will be ephemeral.

The history of the beginning of Fletcherism is, briefly, as. follows: Mr. Horace Fletcher, an American gentleman, middle-aged, fat, dyspeptic, and in a generally demoralized physical condition, hit upon the idea of self-cure by eating less food and chewing that small quantity mouthful by mouthful many more times than is usually considered necessary for proper mastication. There was really nothing novel in the essential features of this "cure." Even the ancients knew that middle-aged men in easy circumstances usually eat too much and chew too little. And in more recent times Gladstone had set the example of better food mastication by making it a rule to "give every tooth a chance"—thirty-two mastications to each mouthful.

But Gladstone was a man busy with so many things that he did not ride his chewing hobby to

the exclusion of all others. With Mr. Fletcher the case was different: he had but one hobby in his stable, and he focalized his equestrian feats upon that one. Moreover, he was no ordinary rider. He had no goods to sell—no new kind of breakfast-food to foist upon the guileless and gullible—simply a philanthropic and entirely worthy purpose to tell the world a great discovery that would make the world much better. The principle of the new fad was simply to eat little food, but chew it and chew it, and then chew it some more, until it was tasteless and nauseating. By such means weak men would be made strong, and strong men stronger, on a mere pittance of food.

As proof of this, Mr. Fletcher could point to the great change for the better in his own physical condition. And there is no denying that this change was revolutionary. But there are two vitally weak points in the evidence, which Mr. Fletcher, lacking expert medical knowledge, could not to be expected to appreciate. The first is, that simply because the multi-chewing method had cured one man it need not necessarily cure any other man; the second, what might indeed be very good treatment for a sick man (as Mr. Fletcher certainly was) might be positively harmful for a well person.

The Dangers of Diet Fads

Medical men learned many generations ago that "one man's food was another man's poison," literally; and experience has taught them not to found any hard and fast rules on the results of experiments upon a single individual. Moreover, as I shall show in a moment, our knowledge of physiology, which surely cannot be completely at fault, seems to show that Fletcherism could not be a scientific cornerstone upon which to build a perfect health temple.

But "scientific caution" was singularly lacking among the converts to the new fad, several of whom were stamped into the herd from the ranks of the medical men themselves. Some of these were undoubtedly sincere, even if somewhat too credulous. Others, we may strongly suspect, were influenced by the prospect of getting aboard a very well patronized and well advertised excursion.

We need not chronicle the stream of adulatory literature that the new fad called forth. An example or two will suffice. One learned professor wrote to the instigator of this stampede: "What you have done to unfold physiological mastication means more for human weal than all the mere medical prescribers have given the world from Adam to the present time!" A sanitarium keeper carolled in this mawkish strain: "We are

chewing hard at —— ——, chewing more every day. . . . We have gotten up a little Chewing song which we sing to the patients. . . . I read some of your notes to my colleagues, and they were so much affected that tears came into their eyes.''

And yet, half a decade after this affecting, lachrymose scene, Fletcherism was not only dead as a fad, but was known to be a ''physiological monstrosity'' instead of the great physiological discovery. In the meanwhile it had demonstrated from a somewhat unusual angle the well-known fact that enthusiasm may play havoc with judgment—even about such a prosaic thing as eating.

The Fletcherites overlooked some fundamental truths that should be self-evident. It should be apparent to any intelligent person that it is quite as impossible to create matter by chewing it, as by any other known method. Moreover, the amount of matter required for bodily nourishment is much more than the Fletcherites advocated. That much for quantity.

As to quality, every one knows that three kinds of food are necessary to life: (1) proteids, represented by meats, fish, and eggs; (2) carbohydrates, such as the starch furnished by vegetables; and (3) fats, of one kind or another. What effect does mastication have upon these various essentials? On the proteids it has practically none, the digestion of these important kinds of foods taking

place farther along in the alimentary canal. Similarly, the fats are not influenced by mastication or ensalivation in the mouth to any very great extent; while the starches are converted into a form of sugar—a necessary step to absorption of this form of food.

It would appear, then, that the advantages of excessive mastication were appropriate and helpful, only when eating starchy foods. In short, one might consistently bolt his meat, but must chew his vegetable soup thoroughly, if his digestion is to remain perfect. But Nature has made provision for toothless infancy and old age, and does not place a very severe digestive task upon the secretions of the mouth at any period of life. Indeed, the important part in the digestive process of those substances upon which the saliva acts in a helpful manner, is carried on in the intestines through the agency of a much more powerful and active digestive ferment secreted by the pancreas. So that prolonged mastication will, at most, simply help to perform a digestive act in the mouth, with its relatively ineffective mechanism, and thus relieve an efficient organ, the pancreas, of a task for which nature specially designed it.

Moreover it has been found by recent experiments that excessive mastication may reduce the food to such a degree of minute division that it is not handled properly by the natural processes of absorption. Like finely ground powder grains in

a great gun, it causes a premature explosion of energy in a too circumscribed area, instead of being distributed properly along the bore.

But all this is simply an explanation of why excessive mastication is an unnecessary, as well as a somewhat disgusting practice. It offers no explanation of why Fletcherism lost its popularity as a fad. Yet such explanation is scarcely necessary. The fact that it was simply a fad sufficiently explains its decline in popularity: for such is the fate of all fads. And, as regards this particular hobby, it was most fortunate. For if we had actually carried out the plans of the Fletcherites, and attempted to raise the younger generation of growing boys and girls by the régime of chewing and parsimonious diet that had cured an elderly and pathological gentleman, we should have produced a race of sickly weaklings.

Value of Established Customs in Diet

Normally healthy persons should shun all eating-fads. For it is a clinical observation, transmitted through many generations of physicians, that faddishness about eating is a sure road to dyspepsia. "The generalized food customs of mankind," said Sir William Roberts, "are not to be viewed as random practices adopted to please the palate or gratify an idle or a vicious appetite. These customs must be regarded as the outcome

of profound instincts which correspond to certain wants of the human economy. They are the fruit of a colossal experience accumulated by countless millions of men through successive generations. They have the same weight and significance as other kindred facts of natural history, and are fitted to yield to observation and study lessons of the highest scientific and practical value.''

This being the case we should be able to find some reason why we have formed the habit of eating our meals with the various dishes served in certain definite order, if it is not merely a caprice of fashion or conformity. In short, why we eat soup first and pastries last, instead of the reverse.

Some recent investigations offer an entirely satisfactory explanation for doing so, on physiological grounds. According to a recent writer, "we have unconsciously established a routine of courses in the dinner that takes thorough cognizance of the physiological principles upon which digestion is founded. Even such matters as festive attire, floral decorations, and music, we are told, have their share in composing a generally favorable stage-setting, as it were, for digestion; for it has been abundantly shown in recent years that a person's mood is of the greatest significance in the performance of the digestive functions.''

This last fact should be borne in mind in seek-

ing a reason for the undoubted success of Fletcherism in some instances. The faddist is an enthusiast, for the time being at least, and undoubtedly in many instances his mood rather than his method accounts for the beneficial results.

Why Soup Precedes Pastry

But to return to the physiological reason for the order of our meals. Dr. Leverson's explanation of the logicality of having the dessert course composed largely of carbohydrate preparations—pastry, sweets, fruit, flavors, and cream—is enlightening. "Foods of this order, as is well known, are not primarily digested by the gastric juice, but are acted on by the salivary ferment known as amylopsin. This ferment is incorporated with the food in the mouth, and will continue to act until it is neutralized by the gastric juice. It was formerly assumed that such neutralization must take place almost immediately on the swallowing of the food. Recent studies discredit this view, it being alleged that the food last ingested occupies a central position in the stomach for some time, and that only the peripheral portions are actively in contact with the gastric juice.

"Thus the carbohydrates that make up the dessert are so placed as to be acted on advantageously and for a long period by the salivary ferment in-

corporated with them; whereas had the same foods been ingested early in the meal they would have been brought at once in contact with the periphery of the stomach, and their digestive changes arrested."

Here is another reason, then, why persons in health should not be too ready to disregard established customs in eating. Of course the case is entirely different when there is organic bodily disease. In such conditions, clinical and laboratory experiences of competent observers must be the guide. But this guidance should be entrusted to a thoroughly competent and trained observer, and under no circumstances should self-guidance be attempted. No person who is actually ill should attempt to prescribe for himself in the matter of diet any more than in kinds of medicine.

We may feel sure that there is a sound physiological reason for the dietary differences that exist between widely separated communities, such as those at the equator, and those living near the Arctic circle. There is conclusive evidence of this in the fact that persons who visit these regions, and remain for any considerable time, find it advantageous to adopt the food, and food customs, of the natives. The people of any community, taken collectively, choose the proper kind of foods best adapted to their needs, guided by an instinct created by experience. Individually there are marked exceptions to this, particularly in highly

civilized communities. This last is, indeed, reiterating the statement that "one man's food is another man's poison"—in individual cases only, however. Taken collectively, one man's food is another man's food. And it is better to follow established customs than to attempt to overthrow, or disregard them.

The perennial fad of vegetarianism is a case in point. The life of this fad seems to be perpetuated by the application of the sophistic rule that what is food for certain individuals is food for the race. There are certain healthy persons who live and thrive on a vegetable diet; and there are pathological conditions in which a careful vegetable diet undoubtedly prolongs life.

Vegetables and Mental Efficiency

It may be pointed out with entire truthfulness that vegetables contain all three of the essential food elements—proteids, carbohydrates, and fats. To be sure these elements are not offered in ideal proportions for the use of our systems; but the human organism is such a wonderfully adaptable mechanism that it will select out the right proportions for itself if supplied with sufficient quantities. The system will "keep up steam" on this bad fuel, just as a boiler can be made to steam with poor coal. But if a bad quality of coal is used, there must be more stokers and more labor,

which is poor economy. Moreover, poor fuel tends to foul the boiler and shorten its life.

A purely vegetable diet makes poor fuel for the human engine. Yet by putting on extra "stokers," in the form of expended vital energy, this poor fuel will keep the body machinery running. As a result, however, the system expends vital energy for the somewhat lowly purpose of stoking, which might otherwise have been utilized for much higher fields of creative work, both mental and physical.

It is a significant fact that meat-eating races lead the world in everything—war, commerce, science, and art. The relative positions of the Orient and the Occident exemplify this. The Orientals consume far less meat than the people of Europe and America, partly from necessity, and partly on account of religious belief. And for centuries they have lagged far behind the Europeans in progress, and in war.

Japan is making a strong bid to become the one exception among Eastern nations. In the arts of peace she is certainly climbing to a high level; and the recent war with Russia demonstrates what she can do in war. But is she doing these things on a vegetarian diet as of old? Not at all. Her fighting seamen received the same proportion of proteid foods in proportion to their body weight as the British tars; and her soldiers, in her recent conflict with Russia, "had a more abundant pro-

teid diet than any other army in the field has ever enjoyed."

Thus we see that Japan offers no exception to the rule that meat-eating races are the leaders physically and mentally. And this suggests an answer to the question which is frequently asked, and which concerns us principally in this chapter, as to what foods are "brain foods" if we may use the term. So far as we know, it is quite impossible to feed the brain except through the general process of feeding the body. The old idea, which still persists, that fish acts as a food for the brain rather than the body, has no basis in fact.

If the child during its early years has been given proper training, its own instincts will be its best guide in the selection of proper nourishment later in life. Ill health, of course, frequently causes caprices about eating; but this is quite another matter.

Most children at the age of puberty develop an appetite for meat, and at this period should be encouraged to gratify it. Important, vital changes are taking place in the system at that time—changes that have a direct bearing upon future mental, as well as physical states—that require a full protein diet for their development. Later the craving for meat will gradually subside, and a well-balanced régime be established.

The question is asked frequently whether active

mental or physical exertion should be indulged in immediately after eating. As a general rule it is not advisable to do either one or the other shortly after a meal; but here again the habits of the individual must be considered. Some persons, even athletes, are accustomed to taking strenuous exercise regardless of meal time. Indeed some vocations make this necessary. But we do not find that persons following these occupations are more subject to digestive disturbances than others.

I once inquired about the eating habits of a champion wrestler who was doing strenuous training for an important match. This athlete made it his regular practice to take a hearty meal at noon, and go at once to the gymnasium to wrestle with his trainers. When I expressed astonishment at this, and asked the athlete if he considered his method a good one, he declared that he had always found it so.

"How can I work if I don't eat?" he inquired. And this was the key to his point of view.

Of course his theory was entirely wrong. The food taken into his stomach fifteen minutes before beginning his exertions would not be utilized to furnish strength until several hours later. Yet in practice his method seemed to work satisfactorily, judged by results.

We must not interpret this wrestler's methods, however, as indicating that violent exercise im-

mediately after eating is advisable, for athletes or others; but rather that a vigorous body frequently overcomes by adaptation obstacles that oppose rational hygiene. Possibly if the excessive mastication votaries of parsimonious diet had hit upon a method similar to that of this wrestler, instead of their particular hobby, this sort of fad would have become popular in place of chewing. And then we should have had still another example of mistaking physical adaptability for physiological need.

It seems to be a perfectly natural thing for children to take violent exercise regardless of the time that food is ingested; and as no harm seems to come from this it is not advisable to interfere with this natural process by compelling the child to rest after eating. The case is somewhat different as regards mental effort. Children should not be forced to study immediately after taking a full meal.

This seeming paradox may be explained on physiological grounds. Physical exercise is a heritage handed down through countless thousands of generations, and has established itself as a natural process; whereas close mental effort is a recent innovation and may, therefore, be regarded as an artificial one. When close mental application to printed pages has become a natural process through ages of indulgence, it is probable that the children of that future age will be able

to eat and study with the same impunity that they may eat and play at present. But this result of future evolution need not concern us now.

The rule that applies to children about mental effort immediately after eating, applies also to their parents; and for the same reason. But the child's craving for protein food, and the necessity for it, falls into another category. Adults of sedentary habits should not indulge too freely in a meat diet. There is a grain of truth in the "vegetarian's" theory (as there must be in any fad that gains a hearing) to the extent that many persons of sedentary habits indulge too freely in a protein diet. In short, a necessity of childhood may be a menace to old age.

The habit of overeating may be placed in the same category, and may be explained on the same physiological grounds. Normal children are in a state of almost continuous physical activity, while their minds remain relatively inactive. Adults are prone to become slothful creatures physically, with exaggerated mental activities—a condition precisely the reverse of that in childhood. So that there are substantial physiological reasons for reversing the methods of nourishing the individual at these two periods of life. And practical results demonstrate the soundness of the theory.

But this theory, like many others, should be interpreted only on broad general lines. A finical anxiety about the kind or quantity of food to be

eaten is quite as harmful as gross carelessness in the opposite extreme. A healthy person should think little about his food, either before or after eating. Too close scrutinizing is likely to be the gateway to hypochondriasis.

V

Stabilizing the Faculties

THERE is no one, short of the actual imbecile, who does not appreciate that mental stability is a valuable individual asset. But I think very few persons fully realize what a terrible calamity the shaking of that stability really is, largely because most people have given the matter very little thought. If we pause and consider even for a moment what permanent mental incapacitation means, however, I think that any one will agree that death itself is relegated to a minor position by comparison.

Nothing approaching full compensation can be returned for the toll taken by death. Yet it is possible for every man to make such provision against the ravages of the Grim Reaper, through the medium of insurance, that his loved ones will not be lacking in material comfort, if he is suddenly taken away. But no insurance can be taken out to compensate for mental unsoundness.

Moreover, the person who becomes insane not only ceases to be a provider, but himself becomes a dependent burden. So that his incapacitation represents a loss more disastrous than actual de-

mise, because it may add many years of continuous incumbrance to his relatives.

It is evident, therefore, either from a selfish standpoint or an altruistic one, that the maintenance of mental stability is a great desideratum. Nor is the quest a hopeless one, even among those predisposed to mental unsoundness. For fully half the cases of disturbed mental equilibrium are preventable.

Every one knows how easily the vertical position of a rolling hoop is maintained by a slight touch on one side or the other just at the moment when it begins to waver, but how impossible it is to avert the fall once the hoop is deflected beyond a certain point. Just so with mental equilibrium. A deft touch here and there at the right moment will keep the mental mechanism in a flexibly firm "vertical position," as it were, and avert the impending catastrophe.

One of the first and most constant symptoms of threatened mental instability, is insomnia, or the unrefreshing sleep that is frequently its forerunner. It is a clinical indication in childhood, and a danger signal later in life. At either period its warnings should not be disregarded. We must not, of course, confuse true insomnia with the dreamy states that accompany over-sleeping, or the habit of "slovenly sleeping" that is acquired by some persons.

Sleep itself is still one of the great mysteries of

life. And we are not able as yet to explain satisfactorily just what mysterious mechanisms produce sleep, or its antithesis, insomnia. But we do know very definitely the general effects of both these conditions.

The Mystery of Sleep

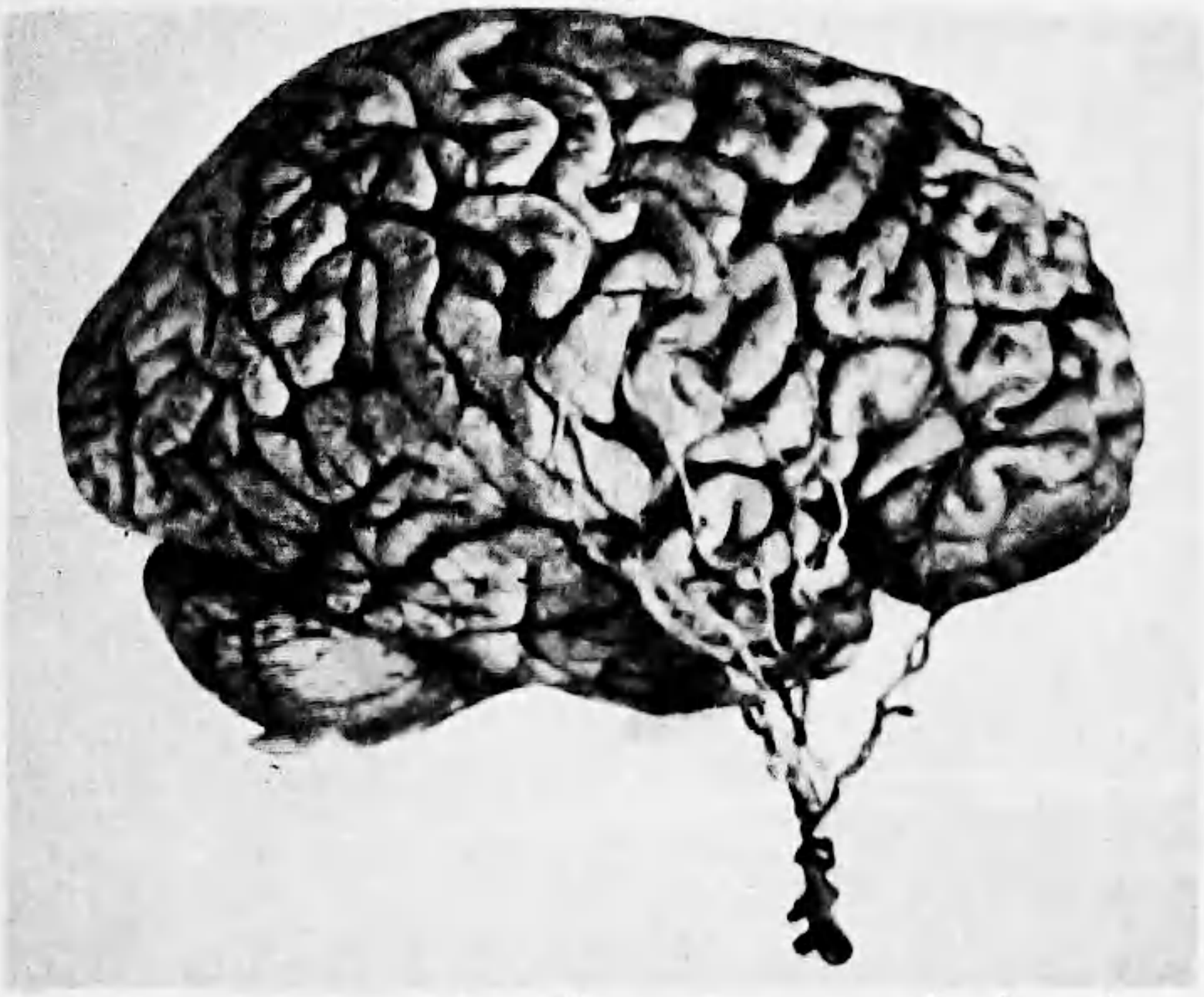
"The marvel of sleep is lost upon us owing to the unfortunate peculiarity that our ability to wonder is soon abolished by mere repetition," says Dr. W. H. Thomson. "Because the recurrence of sleep is as certain and regular as sunset itself, it does not occur to us to wonder at it, or to ask what it all means."

We are certain that a change in the blood supply of the brain takes place during sleep, less blood going to the head at that time than in the waking hours. This may be demonstrated by exactly balancing a person horizontally on a specially prepared tilting board. So long as the person remains awake and motionless the balance is maintained, but as he falls asleep the board gradually tilts downward, showing that the blood has been transferred from the head to the other parts of the body. As the sleeper regains consciousness the horizontal position is again assumed as in the beginning of the experiment.

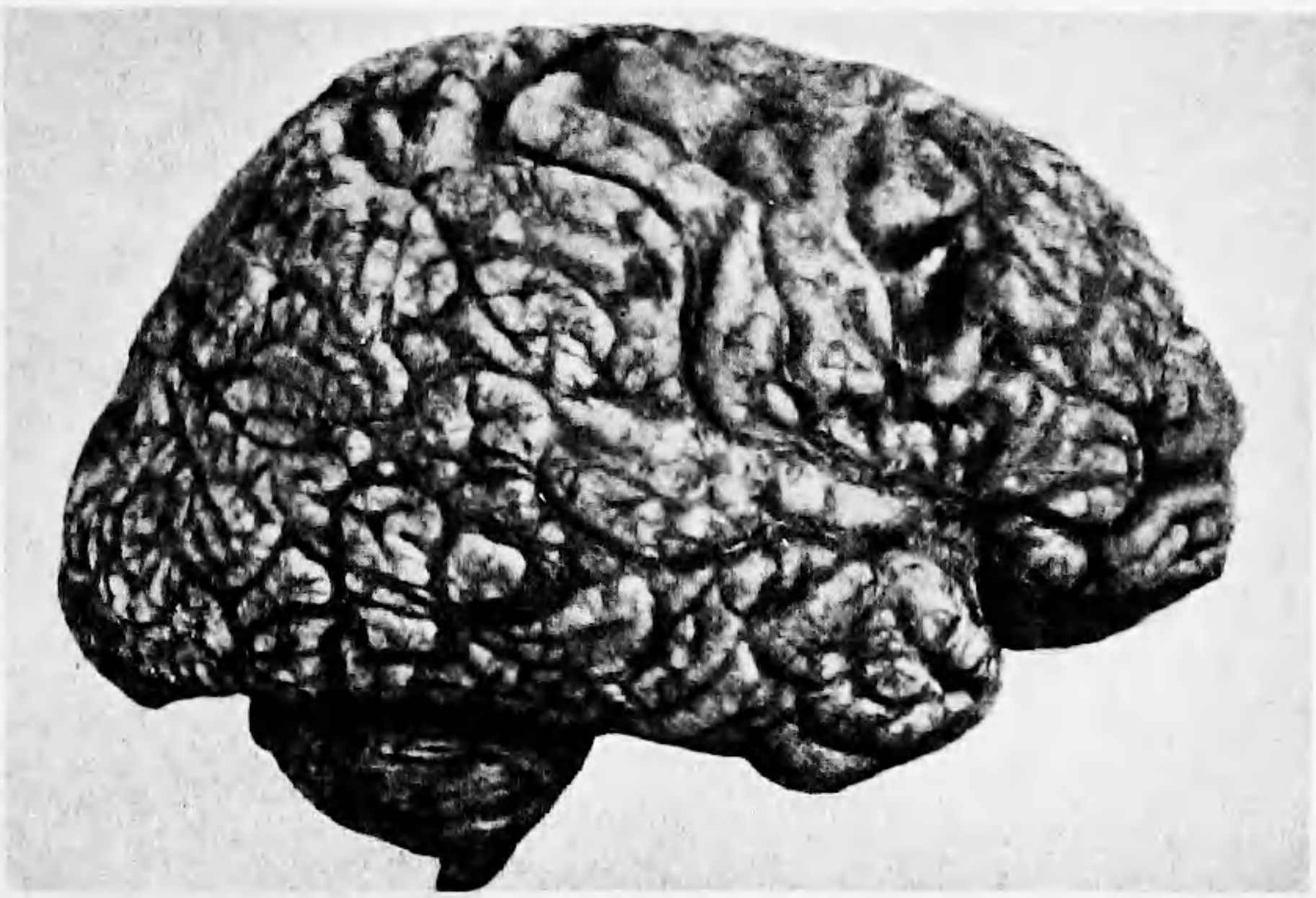
This, and other experiments, make it certain that an anemic condition of the brain is produced

Structural Changes in Mental Diseases

The brain in general paresis: A mental disease dependent upon syphilis.



An essentially normal brain



Brain in general paresis.

during sleep, and probably the extent of this anemia, or blood depletion, determines the profoundness of the sleep, although this is by no means certain. But for our purpose it suffices to know that there is more blood circulating through the brain during wakefulness, and less during sleep, and we need not concern ourselves with the nervous or chemical action that may produce these conditions. I shall show in a moment why it is important to understand this fundamental fact in combating wakeful conditions.

We should distinguish very exactly between true insomnia and certain "habits" of sleeplessness. Most persons who sleep badly do so because they have not learned to sleep properly, or because they do not put their knowledge into practice. Many persons form bad habits of sleeping, just as they do about eating or drinking. Some sleep too little, others too much. Of the two faults I believe the latter is the more common one, although too little sleep is more harmful than too much. The person who lies awake some little time after going to bed, or lies in a half wakeful state for any considerable time before getting up, does so usually because he is trying to take more sleep than he requires.

Such a person usually feels stupid on arising, his mind does not work readily, and it may be several hours before he feels himself to be keenly awake. The normal feeling after a good night's

sleep should be one of vigorous refreshment, which continues throughout the day, with the usual fatigue, but not exhaustion, at the end of the day's work.

A condition of very different significance is that of feeling exhausted in the morning, even after an apparently good night's sleep, which is followed by a feeling of well-being, or even exhilaration toward the end of the day. This condition is pathological, and indicates that the system is run-down and debilitated, and needs attention. For it may be the beginning of physical depression, a condition that may be corrected easily if taken in hand in the beginning, but which leads to serious illness if neglected. Frequently it is the result of nervous exhaustion, or mental agitation.

One of the essentials of good sleeping is to make a practice of going to bed as regularly as possible at the same hour, and rising with a corresponding regularity in the morning. In this way a correct "habit" of sleeping is quickly formed. Our bodies, like our minds, acquire habits very quickly, and tend to retain them tenaciously.

As to the exact time of retiring, that must be determined by each individual, for himself in accordance with his habits and walk of life. The old rule, "early to bed and early to rise," is useful only in the sense that its practice implies regularity in sleeping. We may stamp as false,

also, the aphorism that "an hour's sleep before midnight is worth two after midnight." For in point of fact it is the number of hours of good sleep that count, not the particular time at which they are taken.

It is true, of course, that if a person goes to bed at eight o'clock, his most profound slumber will be taken before the middle of the night. For the mind sinks quickly into its deepest unconsciousness, remains so for three or four hours, and then gradually approaches the conscious state. But this cycle will be produced just as readily and just as certainly, whether the hours be from ten to six, or from one to nine. The advantages of the earlier hours lie solely in the fact that the distracting sounds of a busy world are less likely to be a disturbing factor during the earlier period.

We should remember that the rule about early retiring was made in an age when night meant darkness, and does not apply to the present age, when gas and electricity have made the day twenty-four hours long instead of twelve. Moreover, there are many persons—the majority of adults in cities, at least—whose social or other duties keep them up until midnight several nights in each week. For such persons the rule about retiring early would be made only to be broken irregularly; and for this reason it is far better for them to choose the later hour as the usual one

for retiring. Indeed, it is advisable for any person who is likely to be up until midnight two or three nights in the week to make that time the one for retiring regularly as a matter of habit.

Most people find it necessary (and it is certainly advisable) to arise at practically the same hour each morning. If they make it a practice to retire three nights in the week at twelve, and three at ten, rising at their regular hour each morning, they will obviously be sleeping too much, or too little, at least half of the time. It is far better to make the hour for retiring more nearly uniform, particularly if there is a tendency to sleep badly.

But six nights only account for the working days of the week. What of the seventh?

A few years ago the *Medical Record* published an editorial on "Blue Monday." In this the writer exonerated Monday for any responsibility in producing the proverbial "azure hue," and placed the onus upon the foolish, unnatural, and physiologically bad practices of the preceding day—the "hang over" effects of irregular sleeping, of eating, drinking, working, and playing, common to our Sabbath Day customs. If we would conduct ourselves on Sunday as we do on week days, the writer averred, "Blue Monday" would be striken from the calendar.

The Habit of Irregular Over-sleeping

A great majority of people make it a practice to loll in bed on Sunday morning, thus disregarding the established habits of the other six mornings. If asked why they do this, many would assert that they are " catching up " the sleep lost during the week, thus attempting to correct in one day the losses of six.

In point of fact this is seldom the real reason for protracted sleeping, and this method would not correct the fault if it were. For it is impossible to force more than a certain amount of profound sleep upon the brain—one cannot force himself to stay asleep as he can to keep awake. It has been demonstrated repeatedly that the person who stays awake seventy-two consecutive hours, let us say, thus losing twenty-four hours of sleep, does not " catch up " the lost hours by twenty-four consecutive hours of slumber even if given abundant opportunity to do so. Experiments have shown that the average man will not take over seventeen hours of sleep after the long period of wakefulness, and thereafter require only his regular number of hours' sleep each night.

This suggests that the system is capable of intensifying the quality of sleep to meet emergencies. Indeed, this mysterious intensifying process seems to be normal in some favored individuals, who require far less sleep than most of their fel-

lows, because their sleeping apparatus is more efficient. Napoleon was an example, and Franklin another. And undoubtedly it was this special faculty of the American philosopher that led him to make the rule for the number of hours required for sleep as, " six for a man, seven for a woman, eight for a fool." But his standard is undoubtedly much too low, both for man and for woman; and the amount of sleep required by the fool is of no consequence.

The implication that most persons sleep more than is really necessary, however, is probably well founded. But each individual is a law unto himself, and must determine for himself what his requirements really are. If he stays in bed nine hours and does not sleep soundly during all that time, or is not refreshed and in vigorous mentality on rising, he is probably trying to force more sleep upon his system than it requires. His symptoms are proof of this. If he sleeps only six hours, and does not feel himself completely recuperated, he is being too parsimonious.

There is one form of insomnia which is characteristic of a definite pathological condition, and should be regarded with apprehension. It is characterized by a period of wakefulness that comes in the middle of the night to persons who are usually good sleepers, and which follows a period of sound sleep earlier in the evening. When such a thing occurs repeatedly night after night without any

apparent cause, particularly in persons in middle life or older, it is likely to be a symptom of high blood-pressure which is the forerunner of organic disease. The persons with this symptom should seek the advice of a physician at once. For in this early stage it is quite possible to correct the sleeplessness by correcting the underlying cause—which is vastly more important. Later on, when organic changes in the blood-vessels have actually taken place, it is impossible to correct either the symptom or its cause.

Habitual dreaming is abnormal, although an occasional dream can hardly be considered as an abnormality. Too much food taken late at night, too many hours of sleep, high mental tension and worry, usually account for most dreams of the occasional variety. When the dreams are frequent and distressing, even when correct habits in sleeping are rigidly practiced, some physical abnormality should be suspected.

Some confusion has arisen in the minds of certain persons as to whether it is a bad practice to eat heartily just before retiring, since physicians sometimes prescribe a glass of hot milk, or beer, at bed-time to aid in inducing sleep. There need be no confusion on this point, however, since the effect of a glass of hot milk is very different from that of a full meal. The glass of milk being easily digestible does not tax the circulation except to the extent of diverting enough blood from the

head to aid in the mechanism of sleep production. A full meal, on the other hand, sets the blood pounding through the vessels, and tends to increase, rather than diminish, the cerebral circulation.

We know, of course, that there are thousands of persons who habitually take a full meal before retiring without experiencing any unpleasant results. But here again habit is a determining factor. In such cases the system has adjusted itself to this untimely, but regularly ingested meal, and is vigorous enough to counteract the effects of a habit that is physiologically bad. In any event, these exceptions do not vitiate the soundness of the general rule against eating before retiring.

How Sleep May Be Induced

Persons engaged in mental work which does not stop at the end of the ordinary working day with the usual evening idleness or lethargy, frequently find that the mental activity, with its flood of ideas, continues when they cease work and attempt to sleep. In such persons the sudden change from active thinking to the exact antithesis, sleep, is too great to be accomplished suddenly, without some kind of "tapering off" process. Many things suggest themselves for this purpose, but the basis of all is really a change of vocation—a mental "stepping down," diverting the mind into

less active channels, and thus gradually diminishing the tension.

Some persons find that a brisk walk in the open air for half an hour has the relaxing effect; but to others this muscular exercise is irksome, and consequently disturbing rather than helpful. A very effective method, as innumerable persons have discovered, is to indulge in some kind of light, pleasant reading for an hour before bed-time. Reading in itself is such a reflex act that it requires very little mental effort; while the interest of the text, such as that of a story, relaxes the mind without taxing it, and prepares it for sleep.

Some such expedient seems almost necessary for those who spend most of their waking hours in reading or writing; for to such persons the absence of the accustomed printed page before the eyes does not check the activity of the mind. When, however, the printed page is there, but its contents of such nature that it requires practically no cerebral effort to interpret it, a distinctly relaxed mental condition is produced. It is said that the great German historian, Mommsen, whose mind was wonderfully active and retentive, rested his brain by devouring all manner of "yellow-backed" novels during his resting periods of the day or evening. Thus an unusually receptive mind, which retained desirable information with remarkable precision, was rested and recuperated by the kind of careless novel reading that ordi-

narily is so detrimental to the memory. But Mommsen took his novels as medicine, so to speak, not as real mental pabulum.

The method of preparing the mind for sleep by reading or other diverting process, may be regarded as psychic rather than physical, although it is probable that the ultimate effect of depleting the brain of blood is the same by whatever process. But there is at least one way of producing this condition mechanically that is most effective and often expedient. This is through the agency of a prolonged tepid bath taken just before retiring.

In order that the bath may be effective, some little care about certain details is necessary, since carelessness in these matters may result in effects exactly opposite to the one desired. Thus a bath that is too hot, or too cold, or one that is taken for a very brief period, may tend to constrict the vessels of the skin, producing a cerebral congestion rather than depletion. On the other hand if the water in the tub is slightly warmer than the natural heat of the body, which can be determined by the hand without the aid of a thermometer, the desired effect is readily produced.

The person taking such a bath should do so just before getting into bed. He should lie in the tub with the body completely submerged, with a cool wet towel placed on the head, and remain for fully fifteen minutes. He should then dry himself quickly and get into bed at once.

In this way the blood is mechanically diverted from the head to other parts of the body. The prolonged bath distributes the blood all through the body by relaxing the vessels in the trunk and limbs, while the cool towel on the head helps to constrict the cranial vessels, and thus aids actively in the depleting process.

But of course it is not always convenient to take a prolonged bath before retiring; and in any event, if one were obliged to continue taking such baths habitually to induce sleep, a truly bad habit would be formed. As an occasional aid, however, the prolonged bath is of greatest usefulness.

As a ready means of inducing sleep, one of the various purely mental expedients is probably better for those who are habitually prone to sleeplessness without definite physical cause. The author of "The Science of Happiness" suggests one of these methods that seems particularly commendable.

"Challenge systematically any line of thought that appears, and banish it from consciousness," he instructs. "The thing is not difficult for a disciplined mind. You have simply to vow mentally as you find yourself thinking on any subject, 'I will not think about that,' and as it were you shut off the current in that direction. Of course through association your mind is instantly supplied with some other line of thought; but this

also you challenge in the same way as soon as it appears, and so on as long as you are conscious. You thus prevent any single line of thought from becoming paramount in consciousness, and one line after another being subordinated, the tendency is to a lower and lower level of mental activity, till presently consciousness is lost. It is possible for some persons to put themselves to sleep voluntarily in this way at any time when they choose even during the day and in the midst of most active thinking. The boon which such an accomplishment furnishes the tired brain on occasion, makes the acquisition of this power well worth the effort.''

It is probably superfluous here to call attention to the necessity of thoroughly ventilating the sleeping apartment during the night, as a knowledge of the recuperative effects of fresh air has become a part of our education. Yet experience shows that, even to-day, there are many cases of insomnia, or at least bad sleeping, due to neglect of this fundamental principle of hygiene. The sleeping-porch, and cool bedrooms with all windows hoisted, will correct many cases of sleeplessness. Nothing supplants fresh air as a soporific. And we may add that no room, even with many windows, and all wide open, quite equals the open-air bedroom. Any one who will make the experiment even for a single night will be convinced that there is a very distinct difference between the

night air in the open, and the air that circulates in an open bedroom.

Most persons who make the experiment of sleeping out of doors are loth to discontinue it. A few nights of open-air sleeping make the bedroom seem stuffy and intolerable. And herein lies the one disadvantage of the sleeping-porch: if it cannot be used habitually the discomforts of the intervening nights spent indoors may offset the refreshing effects of the nights in the open.

Under favorable circumstances, then, the use of the sleeping-porch is ideal. But if one is so situated that he must spend half his nights within doors, it is probably better to substitute wide-open windows, particularly if the individual is so sensitive to atmospheric conditions that the nights spent in the bedroom are likely to be restless ones.

We said a moment ago that insomnia was frequently a most important danger signal foreshadowing possible mental unbalance. Concomitant with this, and in many instances producing it, is the tendency to worry—the basis of the great majority of cases of mental breakdown, referred to in a preceding chapter.

It would, of course, be impossible, except in a most exhaustive treatise, to touch upon the multifarious forms and causes of the all-pervading and most complicated mental condition indicated by the single word "worry." The life-quest of each person is happiness, in the particular form which

fulfils his conception of the term: the opposing factor which prevents its consummation is worry, in one or another of its varied forms. Obviously then the term is too comprehensive for more than general consideration. In one form or another it touches upon every phase of human life.

When there is a definite cause for the mental agitation the remedy is obvious, although frequently difficult to apply. But sometimes an obscure physical ailment that is not suspected, produces an apparently causeless kind of apprehensive depression. This condition is so well known —although less frequently understood—that it has been a subject for facetious comment for generations. It was, indeed, the theme for the caption of a humorous sketch in one of our "lighter vein" weeklies a short time ago. Two intimate acquaintances were pictured as meeting casually on the street, one of them greatly agitated.

"Margaret," the agitated one exclaimed, "I'm just worried to death about something."

"Why—er—why, for the life of me I can't redear?" inquires Margaret.

"Why—er—why, for the life of me I can't remember."

Now the theme for this little pleasantry may be found in innumerable cases, and its import is not a matter for jesting. It is a kind of apparently causeless worry that is most significant, and should not be lightly disregarded. Whether the

person so afflicted can fathom the cause of the anxiety or not, the cause actually exists, and should be sought out and corrected. It represents a state of abnormality in which the mental symptom is likely to be caused by some definite physical difficulty, usually the improper functioning of some of the organs of the body. Our ancestors placed the burden of responsibility upon the liver. At present we are inclined to exonerate that organ in most cases. But whatever the exact cause, the person afflicted with this type of apparently causeless mental agitation—the feeling that "something dreadful is going to happen"—is approaching a danger zone and should seek medical advice.

Sometimes this condition may be corrected by proper mental training alone; for mental uplift and fitness tend to induce physical fitness. And of course it is part of the physician's art to combine his psychotherapy with his more tangible remedies. But, knowing as we now do, that there is usually a definite physical basis for mental states, one should not trust to psychic remedies alone until it is clearly determined that the physical basis is wanting, or unimportant.

Much more tangible physical causes for mental aberration are the venereal diseases. And, despite the fact that the prevention of this fertile cause of insanity rests entirely with each individual, save in a few exceptional instances, the number of cases of aberration resulting from venereal dis-

ease is conspicuously large. A single disease of this category is responsible for at least twelve per cent. of all cases of insanity to-day—seven thousand deaths annually from its sequence, paresis, in the United States. It is therefore of greatest significance and of gravest importance. But since this condition will be considered somewhat in detail in a later chapter, we need merely touch upon it here to emphasize the dreadful nature of the penalty which this most easily preventable form of mental aberration exacts.

The special symptoms that we should regard with suspicion when occurring in ourselves, or in others, as pointing, or leading to, mental instability, may be summarized in a sentence: A tendency to brooding, changeability, mental irritability, unusual susceptibility to mental fatigue, headaches, suspiciousness, over-sensitiveness,—any one of these, or combination of them, should be regarded as warnings. To this list we may add, an unusual sensibility to small quantities of alcohol, although this is an inherent defect, rather than a symptom of progressive pathological condition.

Normal Exhaustion and Abnormal Fatigue

Without examining them too categorically, let us consider the exact implication of some of these terms, such as mental fatigue. There is a great

difference between the normal exhaustion that follows prolonged mental effort, and the pathological condition in which even a very small amount of effort causes a feeling of fatigue. In the main this effect must be gauged by each individual for himself, measured by his own past experience. If he finds that he is no longer able to sustain his usual mental efforts—his normal standard, in other words—he should at once seek the reason for this change. But in seeking this reason, he should not be misled by the common fallacy of attributing this fatigue to an overworked brain. For " brain fag " is usually merely a symptom of some obscure physical depression.

Activity of mind does not tend to wear out the brain, but quite the reverse. Indeed by constant exercise the brain increases, rather than diminishes, its capacity for work. And this activity is not maintained at the expense of bodily vigor, as shown by the fact that men whose intellectual pursuits require constant exercise of their brain cells are usually long-lived. On the other hand, mental lethargy, like sedentariness, foreshadows early decadence, indicating that the brain, like the body, is far less likely to wear out than to rust out.

It is obvious, therefore, that any person below the age of actual senility, who finds that mental exertion fatigues him to an unusual degree, should take careful inventory of his condition. More than likely he will discover that his body, rather than

his brain, is at fault. In all probability he will be able to locate the cause as his failure to give that body the same healthy exercise that he has given his mind. The remedy is obvious. A little active muscular exercise, carried out systematically, usually brings back the mental activity, frequently with renewed and even increased vigor.

The question as to what sort of exercise should be taken cannot be answered in a sentence; for the same prescription is not appropriate for all cases. Age, environment, and previous habits must all be considered in making the choice. Healthful exercise for a man of thirty might be fatal to a man of sixty; and environmental conditions are frequently determinant factors. But, whatever the form selected, it must be pursued regularly and persistently. Spasmodic efforts are practically valueless. And yet nothing is more difficult for most of us than to force ourselves to take regular and persistent exercise.

Open-air exercises are, of course, infinitely better than those taken indoors, largely for the reason that such exercises afford greater pleasure than most indoor "grinds." The effect of the exhilarating open air itself must not be minimized; but the pleasure derived from taking any exercise is even more important than atmospheric conditions. Little benefit is gained from any muscular exertion that becomes mere drudgery.

For the man past forty, probably golf offers

more practical advantages as an exercise than almost any other game—providing, of course, one likes golf, or can learn to like it. Indeed, for the man who has never taken to any form of violent exercise during his younger life, there is really little choice. Tennis is too strenuous; and baseball and football out of the question. Rowing is a fine exercise, but requires special conditions, and is not adapted to all seasons. Horseback riding fulfils all requirements, but cannot be indulged by most persons, while stream-fishing and hunting, although excellent in themselves, can only be pursued spasmodically, for obvious reasons.

The long-lost art of archery offers incomparable advantages as an outdoor exercise—if one would only practice it. It is a wonderful developer of chest, back, and arm muscles, trains the eye, and steadies the nerves. A lawn, some convenient vacant lot, or even a porch, can be requisitioned for a range, and all members of the family participate in exhilarating contests. But, unfortunately, archery is no longer fashionable. And where is the person with the temerity to flout Dame Fashion for mere health's sake?

One who has been accustomed to violent athletic sports requires a somewhat different routine of exercise later in life from the person who has never been athletic. The athlete should, of course, continue systematic and regular exercise throughout life. But even if he has neglected his muscular

system for several years,—between the age of twenty-five and forty, let us say—and is still organically sound, he can quickly accustom his system to even very violent exercise, such as wrestling, without danger.

The person who has never done any violent exercises in early life, however, should be warned against attempting them later. His heart and blood-vessels have never been developed to full capacity, or tested by violent exertions, as have those of the young athlete; and it is dangerous to make such a test after forty-five, unless under the most careful supervision. Moreover, such an undeveloped system does not require the same sort of stimulation as that of the fully developed athlete. It has so adjusted itself to this lack of muscular development, that its standard of normality is greatly lowered; and moderate exercise, in a very restricted sense, is usually sufficient to maintain a healthy muscular tone.

Such persons are often fond of walking; and for them walking in the open air affords sufficient exercise. But this moderate exertion does not suffice, as a rule, for the former athlete, or the person accustomed to the violent outdoor games of youth. The muscular effort is so little more than that of the ordinary daily routine, and is of such similar nature mechanically, that it can hardly be considered exercise in the therapeutic sense. Moreover, unless one is fond of walking

he does not do it with zest, or get the exhilaration produced by some of the more unusual forms of exertion.

However, it is much better than nothing, and unfortunately is frequently the only kind of exercise available. And when it is combined with systematic indoor gymnastics, it may serve to complete an ideal combination.

At the present time there are at least a score of books, or "systems," which may be had for a few cents, that give instructions for courses of simple exercises, which, if followed, will put the system into good physical condition. Müller's *My System*, and Gulick's *Ten Minutes Exercise for Busy Men*, are excellent. But no prescription is useful unless filled. And most persons find the régime prescribed in these "systems" so irksome, that despite their good intentions, very few carry it out persistently.

It is perfectly certain, however, that fifteen minutes of exercise daily, with or without any special apparatus, will keep any person in good physical condition. In proof of this, if proof were needed, is the fact that gymnasts who do a daily turn on the stage involving about fifteen minutes' work each day, take no other exercise. And yet nothing is more difficult for most persons than to force themselves to take those few helpful minutes of systematic work each day. Many of my readers can testify to the truth of this assertion, I feel

sure. But when health is to be weighed in the balance against ten or fifteen minutes of odd time, there should be no hesitancy in making the selection, and pursuing that selection systematically.

At first this daily grind is most irksome, and requires considerable urging of flagging will-power. But as soon as the muscles begin to respond, and become firm and elastic, as they do after a few days, the task becomes less onerous; and presently it becomes a positive pleasure. The difficulty in the undertaking lies in getting safely through those first few days of halting muscles, and flagging will.

One of the most destructive factors to mental equilibrium and stability is the habit of harboring gloomy thoughts—in other words the tendency toward pessimism instead of optimism. It may be objected that some persons are "naturally" pessimistic, while others inherit a happy disposition. There is, of course, more than a grain of truth in this: some individuals are more fortunate than others in their natural endowments. But we cannot emphasize the fact too strongly that disposition is not an inherent quality which is irrevocably fixed by nature. A happy disposition, or a gloomy one can be cultivated and enhanced by persistent effort. Moreover, individual dispositions are not determined by surrounding conditions or circumstances, in most instances.

We find a tendency to pessimism in persons who have no extraneous reason for such an attitude of mind rather more frequently than among those in whom the feeling would seem justifiable. We may be certain, therefore, that the development of this mental attitude is the result of faulty training quite as much as any inherent tendency. And since the gloomy, brooding tendency is the dangerons one, we should follow the dictates of the philosophers of all time, and sedulousy avoid it.

"It is our own ills, not those of others which we should treat with philosophical disdain," says Dubois. And it is excellent advice.

In criticism of this philosophy it may be pointed out that persons whose minds have become actually unbalanced do not realize their mental abnormality—cannot appreciate that their attitude of mind is perverted. The statement is, indeed, almost axiomatic. But this introspective obtuseness is a later phase of the disorder. In the early stages of mental aberration the afflicted person usually realizes that something is wrong with him, even though his most intimate friends may not suspect it. Most normal or even semi-insane persons appreciate their own shortcomings far better than any one else; and if these shortcomings are of a nature that tends toward harmful peculiarities, or habits, it is the part of ordinary wisdom to correct them before they become permanently fixed.

We have said in another place that if the child has received proper training in its early years it will have developed a normal trend of mind that will persist throughout life. It follows, therefore, that most persons who become unbalanced have not received such training, excluding, of course, those cases of mental aberration caused by injury, or organic diseases. The abnormalities exhibited by the child are likely to develop in somewhat similar form later in life, unless thoroughly suppressed by training. This fact is helpful in indicating the point from which danger may be expected, and thus suggest methods of avoiding it. And these methods differ very little in principle from those suggested for correcting abnormal tendencies in children, although in the adults they must usually be self-applied.

Frequently, of course, friends notice changes in the personality of others before such changes are fully appreciated or admitted by the individual. In such cases it is the part of duty, and of wisdom, frankly to point out the discovery and coöperate in the process of correction. The fact that others have discovered these changes, which the patient may only vaguely appreciate, or may have striven to conceal, helps him to overcome the threatened affliction.

We must not confuse passing changes of mood with those that are persistent and harmful. All persons are subject to such changes, which are en-

tirely natural, normal, and, within reasonable limits, helpful. The passionless, colorless life that seldom fluctuates from a monotonously level plane, is likely to be a very useless one. But prolonged changes in disposition, without adequate cause, should be regarded with suspicion.

These changes tend to take one of two courses, one toward unnatural excitement or exaltation, the other toward depression and degradation, more frequently the latter. Stated in another way, the person with wavering mental balance is far more likely to neglect the niceties of deportment than to exalt them. We see examples of these two conditions exhibited in the temporary form of insanity caused by alcoholic excesses. Some drunken men become ludicrously punctilious in their deportment; but far more frequently the opposite extreme of carelessness in dress and deportment is exhibited. And a similar carelessness, rather than punctiliousness, is characteristic of most forms of mental aberration.

Any person who is subject to violent outbursts of anger should labor ceaselessly until he overcomes his affliction. For the tendency to indulge in such outbreaks is likely to become progressively worse if not curbed; and these explosions are most destructive to the mental structure. There is an actual and rapid destruction of brain tissue during such outbursts, and the more frequently they

occur, the less time is given the system to repair the physical change. The complete exhaustion and collapse that follow such outbreaks is indicative of brain-cell changes much more destructive than many hours of intense, but controlled, mental effort.

It is a matter of common observation that the type of person who is naturally "quick tempered," but who has learned to control his temper, is likely to rise intellectually far above the level of the passionless and placid individual. For quick wits and quick tempers frequently go together; and the suppression of one tends to enhance the other.

The person who expends his energy in bursts of anger depletes his mental magazine by an amount exactly proportionate to the violence of his passion—harmful expenditure that might otherwise have been diverted into useful mental processes. With his temper under control, however, his full quota of energy becomes available for concentration along helpful, rather than destructive, channels.

One of the best known examples of a hot-tempered man who had learned to control his passion is that of Washington—not the "sickly, cherry-tree" Washington, but the man as he was. During his long career of protracted trials, and exasperations, only on a few occasions did violent anger get the mastery of that forceful personality

—just enough to show that the fiery demon was chained, not destroyed.

Probably the best way to conquer bursts of anger is to review the actual effects of such outbreaks in calmer moments. A little reflection will show that anger puts one at a disadvantage, physically and mentally. Quick, straight thinking, is one of the assets of ability: the man in a passion may think quickly, but his judgment is proverbially bad. And so when pitted against a calm mind of equal ability his disadvantage is obvious. The force that should be directed to correct thinking is consumed in the false thinking created by anger. This fact alone—the fact that anger gives advantage to the opponent—should offer sufficient stimulus for conquering the tendency to violent outbursts.

The physical disadvantages of great anger are just as demonstrable as the mental. It is one of the fundamentals of boxing, for example, to keep one's temper. "Get the *other* fellow mad" is elemental in the boxer's training.

I recall an illustration of this principle during the early training of a promising beginner with the padded gloves. The young man, who had been led to overrate his fistic ability by successful contests with fellow amateurs, was taking his first serious lesson from a master instructor. The fact that the veteran eluded him at every turn at first surprised, and then nettled him into obviously

suppressed anger. At this stage, the instructor, who was studying his pupil's mood with thorough understanding, began deftly tapping the young man's face just hard enough to sting and irritate, and with exasperating frequency.

Stung by the blows, and by the laughter of the onlookers, the boy lost every vestige of self-control and rushed upon his tormentor to annihilate him. But instead of accomplishing this, he now received more frequent and more stinging blows, despite his frantic efforts. Finally he stopped from sheer exhaustion, sobbing with impotent rage. When the boy had regained his breath, and his equanimity, the instructor went over to him, patted him on the back, and gave him some good advice—excellent advice for every person, regardless of the source.

"Never get mad, my boy," he said. "No matter what happens, smile. If the other fellow nearly knocks your head off, just grin at him—but don't get mad. For if you do, you can't think, and then he'll hit you hard and often. But if you just smile he'll think that he didn't hurt you, and it will shake his confidence in himself. Pretty soon perhaps *he'll* get mad—and then you'll beat him."

This is the accepted philosophy of the ring—accepted because it works. But it is just as applicable as a guiding philosophy in the higher callings which require better, although no more

intense, mental efforts. For any intense excitement such as violent anger, which throws a person into a state of temporary confusion, may be the portal to a permanent condition of mental instability.

A certain degree of sensitiveness and a reasonable amount of suspicion govern the deportment of every normal person. Moreover, the limits of these normal variations are elastic, and differ in each individual. Every self-respecting person must be sensitive in some degree; and even ordinary business ventures require that a certain amount of the kind of suspicion which is engendered by caution, must be exercised.

But hypersensitiveness, which is frequently accompanied by an excessive amount of baseless suspicion, denotes bad mental balance. We must always be questioning the motive of others to a certain extent—it is the basis of all our business transactions, and studies of human nature. But a strong tendency to read evil motives between the lines is a paranoid one that leads away from the paths of normal optimism.

The person who is forever on the lookout for fancied slights will usually find them, and be caused much unnecessary unhappiness by a thousand and one meaningless incidents. So long as the mind of such a person is open to reason, however—so long as a plausible explanation convinces him of his error, his attitude of mind, while un-

fortunate, cannot be considered abnormal. But if constant suspicions drive him to a point where reasonable explanation does not convince, a point at which he reasons from false premises, he has reached a state of mind that is crowding the inner border of the danger zone.

Such a person must take himself firmly in hand, cultivate the habits of overlooking trifles, and regard the generalities of everyday life from an optimistic point of view. He may, to advantage, adopt and amplify the rules once given me by a village carpenter, whose mind evolved a helpful philosophy, while his body pursued its more plebeian tasks. His philosophy may be summarized thus: If your friend fails to notice you in the passing crowd, very well: there are other friends —plenty of them. Or, more likely, he did not see you. If you are sensitive, and suspect that people are talking about you, What of it? They are talking about their betters, and can be ignored. Thus putting aside each obtruding disagreeable impression and substituting an optimistic one, you stifle the paranoid tendency, by a healthful process of introspection and self-education.

"This work of self-education is less difficult than one would think," says Dubois. "I see every day sick people who during all their lives have suffered cruelly from this impressionability which renders them incapable of performing their duties. Often in some days, almost always in some weeks

they succeed in altering their point of view, in seeing things from another angle. In proportion as they recover their mental calm under the empire of healthy reflections, functional troubles disappear, sleep returns, and appetite arises, the body becomes stronger, and the success of this mental treatment demonstrates the supremacy of the mind over the body."

It is helpful and gratifying in reviewing our own shortcomings, to reflect that even the wisest man is utterly incapable of fathoming the motives of others in a vast majority of instances. It follows, therefore, that it is folly to waste one's time on so futile a task; and it is positively harmful if the motive is engendered by brooding suspicions.

I knew a man—a man who was an exceptionally good judge of human nature—who made the following experiment to determine just how accurately he could interpret the motives for certain actions in others: Each day he took note of incidents that came to his attention among his friends and acquaintances, studying them carefully until he had reached a conclusion as to the motive, and then writing down his interpretation. When he had accumulated a long list in this manner he went to each individual, explained what he had been doing, and asked each one to affirm or deny whether his interpretation was correct. In not one instance was his interpretation entirely correct, and in most instances it was utterly wrong!

His culminating experiment gives a general idea of the methods pursued. An editor had recently returned him a manuscript with the usual polite editorial form that "it was not available for our publication." The experimenter had formulated three reasons for its refusal: (1) it was not written well enough; (2) the subject was not interesting; (3) it was either too long or too short. These he submitted to the editor, who promptly gave him a fourth (the real reason) by showing the author a manuscript dealing with the same subject as his own, written and accepted some time before.

Closely allied to the suspicious, paranoid attitude of mind is one of excessive and unreasonable jealousy. Frequently the two are concomitant. The difficulty here, just as in the case of suspiciousness, is to draw the line that exactly marks the division between normal and abnormal jealousy. But when any one is obsessed by unrestrained doubts his judgment becomes very quickly impervious to evidence, and the line shifts towards abnormality. The inevitable result is unhappiness: the possible result, disturbed mental equilibrium, unless the tendency is corrected.

"The cultivation of a thankful spirit and a reasonable humility," says Hollander, "and the determination not to let the pin-pricks of life upset them, would do much to prevent men and

women getting on the slide which ultimately leads to the quick descent into unsoundness of mind."

One cannot emphasize too forcibly the effects of these "pin-pricks," both in the giving and the receiving. They are the basis of more mental distress and unsoundness than all the cataclysms. The household that is cursed with a nagging member is far more liable to disruption than one in which a member is subject to fits of temper.

The term "nagging" needs fuller explication. There are all gradations in kinds and degree, from the vituperating "scolds" of ducking-stool notoriety, to the quiet, insidious, insinuating pin-prick type. The fault-finding scold is the more detestable; but undoubtedly the quietly obtrusive type is the more dangerous one, judged by ultimate results. The explanation of this has a sound physiological basis. The person who is subjected to periodic beratings with intervening periods of calm, is given opportunity for mental recuperation between castigations. But the mind that is subjected to continual nagging, fault-finding, and criticism, is placed in a state of continuous apprehension—a condition of high mental tension in which there are no resting periods for recuperative repair.

Few persons, aside from the physicians familiar with the causes of mental unsoundness, appreciate the amount of actual insanity, and the number of premature deaths from organic diseases, produced

by the quiet, smoothtongued type of "naggers." Yet their peculiar capacity for creating evil may be little suspected except by their immediate friends. For this particular type of person is found most frequently among the cultured classes in the upper walk of life, whose esthetic training causes them to repress their feelings in public better than those in less exalted social positions.

Every veteran physician, did he choose, could cite specific cases in his community in which the nervous systems of entire families had been demoralized by one nagging member. And frequently this particular person is the one that would be least suspected by an outsider. Let me cite one typical case that was the subject of personal observation for several years.

The woman who was responsible for this particular tragedy was born of wealthy parents, given the kind of education fashionable among the "aristocracy" of our grandfathers' time, and launched upon life mated to a man who was her equal in culture, her superior in intellect. His only inferiority was in the matter of worldly goods—a thing that, looked at in retrospect, played an important part in the ultimate catastrophe.

This woman had one quality of mind that is seen so frequently in the highly cultured members of "old families," namely, obstinacy—a thing by no means synonymous with firmness.

And the manner in which this peculiar type of obstinacy manifested itself was in a not unusual trait of making every one do things *her* way, not their own. But this somewhat characteristic feminine quality obtruded itself into every department of her family life, even dominating the amusements of her two sons in a peculiar manner. Her attitude of mind may be summarized as wishing her children to enjoy themselves, but only in the manner which she prescribed, or in the amusements she selected.

While the children were young this attitude was entirely commendable, as her selections were usually good. But as the boys grew older they, very naturally, wished to be their own choosers of amusements and companions. They were, in short, approaching a state of manhood, with the tastes peculiar to men, and beyond the understanding even of a mother.

Yet the mother's peculiar obsession did not change. Whatever the boys proposed doing, and wished to do, was always rejected, and some substitute offered. If they selected skating, she suggested coasting; if they chose the theatre, she advised a concert; if they had planned a duck-shooting excursion on the river, she insisted on a quail hunt. And, what is more significant, she invariably carried her point. So that although the boys were given all manner of amusement and entertainment, they were in reality never doing what

they really wanted to do most. They suffered from "over protection" of a peculiar kind; or, stated in another way, were "tied to an elastic apron string,"—elastic, but with tension that never completely relaxed.

Had these boys been of the deceitful type, who would pretend to go quail hunting but in reality be shooting ducks, as they preferred, I believe they would have profited in mental stability, despite the deception. Yet had they rebelled, and insisted on their own form of amusements, they would have been confronted with a subtle obstinacy which offered no loop-hole to direct attack. They had no choice but to take the form of amusement that their mother decided they should enjoy,—and so half enjoy themselves. The result was the creation of an attitude of mind in which the essential element of complete gratification was wanting.

The fact that the mother's method was one of quiet, insinuative persistency, explains its efficiency. Open opposition on her part would have produced open rebellion in the boys, who were sturdy, manly fellows. But hers was the more subtle, effective method of seemingly gently leading, which was in effect obstinate driving.

The mother's peculiar attitude did not change, even after the older boy had grown to manhood, and graduated from college. Indeed her peculiarity had rather increased, as is usual with any eccentricity that is nurtured by persistent exer-

cise. She still continued to select, or oppose, the companions, amusements, and occupations for her son, just as she had been doing for years.

The result was inevitable. Inheriting from his mother her temperamental peculiarities which were aggravated by her attitude, the mind of the older boy gave way, and he became hopelessly insane. Hard study caused the catastrophe, the friends said. It had nothing to do with it. Persistent, insinuative, insidious nagging (I know of no better term) was the exciting, and determinative cause.

A brief summary of the later phases of this tragedy is illuminative. The unfortunate young man was placed in the care of the greatest physicians of Europe and America successively. But for several years his condition made confinement in an asylum necessary. Then, as his mind had become more enfeebled, and his attitude less aggressive, he was allowed to travel about accompanied by companions and physician. Meanwhile he had developed a peculiar " negatism " similar to that of his mother,—an obstinate persistency in refusing to do things that others suggested, even when he really wished to do them.

Moreover, like many cases of alienation, he had taken a decided aversion to the members of his family. This attitude was particularly apparent when his mother visited him. During those visits, which were made at intervals of several months,

the son became progressively more unhappy, disturbed, and confused, as a result of the active stimulus to his repressed emotions.

For the passing years, and accompanying sorrow, had wrought no change in the mother's attitude, or activity in selecting recreations for her son; and meanwhile, as we have seen, the son had developed a similar active negatism of his own. Thus their points of agreement were quite as far apart as ever. The mother's carefully laid plans for her son's recreations (and she was forever making them) were always promptly rejected, and a substitute suggested; while the son's plans met the inevitable rejection, or substitution. Or if, by chance, both hit upon the same plan at the same time neither could resist the opportunity to switch to some other.

Even in these peculiar circumstances things would have run along fairly well had the mother been willing to exercise a reasonable flexibility of mind. But she would not—probably could not, at least in later years. One does not change one's mental attitude at three score and ten. And so the distressing drama was enacted day after day during her periodic visits.

You will say at once that this woman was abnormal,—quite as insane as her son. Had you known her, however, even as an intimate acquaintance without the knowledge of her immediate family, you would probably be inclined to change

your opinion. A brilliant, active mind, a tireless reader and intelligent interpreter of good literature, a charming hostess, and a matchless housekeeper—where would you find ground by ordinary standards of observation for your diagnosis?

And yet you are not far wrong. Her natural mother's love, which she believed governed her every action, was really dominated by an intense selfishness which had become a form of mania. This selfishness constantly perverted, and in effect, replaced the natural affection.

There is a valuable lesson that may be learned from this strange, although in its essentials, characteristic example, and one that every person who is given to chronic mental antagonism, or kindred attitudes, should heed. For "nagging" is not merely a disagreeable habit, but a manifestation of that most despicable human trait, selfishness. Moreover, its effects are much the same whether it be exhibited in perverse actions, couched in the strident voice of the termagant, or spoken with the carefully modulated intonation of cultured refinement. Like continual bursts of anger it is progressively destructive of the nervous system. But its effects are somewhat different from those of bursts of temper in being less self-destructive, but more harmful to the nervous system of others.

The popular metaphor, comparing the unfortunate lunatic to a "cracked pot," is an ancient one. Its exact origin is uncertain. But if we carry

the comparison between mental misfortunes and broken chinaware one step farther, we can see how this crude comparison may have originated.

Every one knows that cracks in earthenware cannot be completely concealed or repaired. But there is another condition which, in its ultimate effects is just as destructive to the piece of ware as the more palpable cracks. This is the minute system of cracklets that occur in the over-glaze of a piece in which this glaze is not properly adapted to the body of the ware. At first these minute and apparently harmless cracklets are inconspicuous, although they may be discovered by close inspection. But presently they become obtrusive, covering the ware with a fine network of discolored lines—a condition seen in old pieces of badly made china. When this stage is reached the substance of the ware is beginning to disintegrate, little as one might suspect it. It has lost its ringing tone, and presently it falls to pieces—destroyed much more completely beyond repair by this network of cracklets than by any single gaping fissure.

The difference between these two conditions is, that although the actual fissure can never be repaired so as to conceal the crack even when usefulness is restored, the little cracklets may be repaired by a proper system of appropriate glazing, and the piece made as good as new in every particular—provided, always, that this re-glazing is

done before the underlying body-structure is affected.

Curiously enough the name that potters give this fine cracking of the glaze, is "crazing."

In the human piece of china, analogous conditions present themselves. The conspicuous and irreparable fissures that occur, represent the cataclysms caused by injury and specific disease, which produce incurable mental aberrations. The little cracklets are the eccentricities, obsessions, worries, and maladjustments to surroundings—just as the minute fissures in the china are the maladjustment of the glaze to the body-ware—which, if not corrected in the beginning, eventually lead to complete disintegration.

"Nearly all the world is cracked," says one writer, "but some succeed in covering up the cracks better than others." If actual cracks exist, however, it will not be possible to conceal them for any very great length of time. And if they are simply little "crazings"—minute cracklets in the mental over-glaze—it is far better to repair them than to attempt the impossible task of concealing, or rendering them innocuous.

VI

The Problem of Ancestry and Environment

"THE human race to-day is the expressed sum of all the good, bad, and indifferent that have existed in the world from the beginning," says a modern philosopher. Or, stated otherwise, each individual is a composite picture of all his ancestors.

No one has ever seriously doubted the component elements of the picture; the only difference in opinion has been concerning the perspective, and the arrangement of the figures. Some have been inclined to give undue prominence to remote ancestors in the composition, while others have practically ignored them, placing the figures of recent ancestors conspicuously in the foreground. Still others have brought environmental conditions to the front, thus concealing the remote ancestors completely and crowding back the more recent. In short there have been no fixed rules for composing the picture, at least until the closing years of the nineteenth century.

To be sure Sir Francis Galton had formulated his laws of heredity some little time before this.

And Galton's empirical rules have proved to be fairly accurate. But it remained for an Austrian monk, Gregor Mendel, to fathom the riddle of heredity, and formulate accurate laws whose truth could be demonstrated by practical application.

Mendel's experiments were not made with human beings, not even with the lower animals, but were largely concerned with the little plant familiarly known as the garden pea. What possible relation, you may well ask, have the laws governing the heredity of a little plant to those of the supreme animal, Man? or, for that matter, to the lowest member of the animal kingdom? The answer is simple and precise: they have *everything* to do with it. The same fundamental laws of heredity that govern the garden pea apply to all other plants, and all members of the animal kingdom, including man himself.

At the present time the knowledge of these laws is being utilized in the practical development of better plants and better animals. Eventually, we may feel sure, they will be the means of producing a race of better men. The popular eugenics movement of the present time is an earnest of this. For bad heredity plays a leading rôle in a vast majority of nervous disorders, particularly in cases of mental instability; and the science of eugenics, and the application of mental hygiene, may insure future generations a better heritage than our own.

Some of the miraculous transformations that have been wrought in plants, particularly the production of disease-resisting species, suggest the probability that similar effects will be produced eventually in human beings, since the Mendelian laws govern the heredity and methods of propagation in both. An interesting instance of the application of these laws is the production of a rust-resisting strain of wheat created by Professor Biffin, which seems destined to restore the almost obsolete wheat-raising industry of Great Britain.

A few years ago the ravages of the rust-fungus had practically destroyed wheat-growing as an industry in the British Isles. Microscopic studies of this fungus revealed the fact that in order to complete the cycle of its existence it must live for a time in barberry bushes; and these bushes are used extensively in Great Britain for hedges. By destroying the barberry bushes the rust-fungus would be exterminated. But such a radical cure seemed almost as bad as the malady itself.

Professor Biffin found a substitute for this wholesale destruction of the hedges. By breeding experiments, based on Mendelian laws of heredity, he produced a strain of wheat which resembled ordinary English wheat in its quality as a foodstuff, but differed in the important particular that it resisted the attacks of the rust-fungus. Thus the scholarly old Austrian monk, pottering with the pea-vines of his little garden

half a century before, made it possible for the modern English agriculturist to raise his wheat and keep his hedges.

This is but one example in a thousand that might be cited as showing the practical value of knowing the laws of heredity. The California wizard, Mr. Luther Burbank, has created hundreds of new varities, and modified thousands, by his wonderful application of these laws.

But obviously the application of Mendelian laws for the creation of new species of plants, which have neither muscular nor nervous systems, is a much simpler process than its application to the complex organisms of animals. Yet even in the animal kingdom these difficulties are not insuperable; and although the laws of heredity are more difficult to interpret in the higher organisms, enough has been accomplished already to show that these laws apply with the same fixity here as in the less complex ones.

Thus it is possible to produce predetermined changes in color and anatomical peculiarities, with almost mathematical accuracy in the offspring of certain domestic animals and birds. Furthermore, the mental characteristics of such offspring may be changed along definite lines under the magic touch of the Mendelian experimenter.

It is one thing, of course, to predetermine that a certain egg in a nest will produce a thin, active, laying hen, its nest-mate a fat, stupid sterile fowl

for market purposes, and quite another to produce at will a criminal or a philosopher. But if we could control the ancestry of the criminal or the philosopher, as we can those of the fowl; and control, also, the additional item of environment, which enters so largely into the problem of eugenics, we should undoubtedly be able to produce results quite as definite in human beings as in the lower animals.

In a way our civilization is doing this very thing at the present time, and has been doing it for ages—doing it badly when it produced a criminal, and doing it well when a philosopher was created. But, in either case, the individual was simply a happy or unfortunate result of haphazard natural selection. Had these selections been governed by the standards of modern eugenics during all past ages we should to-day have more philosophers and fewer criminals and degenerates.

One of the greatest difficulties in making comparisons between the effects of heredity in man and the lower animals or plants, is the great difference in the time-element of generations involved. The cycle of development in the lower order of animals may be completed in months, or even weeks, whereas in man the cycle is reckoned in years. For this reason the student of human heredity must make his deductions from, and base his applications largely upon past records. But

even with this handicap he has been able to produce some very definite working data—enough, at least, to demonstrate the soundness of his theories.

The evidences of heredity on normal anatomical structures are too patent to admit of argument. The commonplace example of a child's resemblance to its parent is sufficiently demonstrative. But we are more particularly concerned here with the influence of heredity on mental traits, especially those that have a pronounced effect on mental unsoundness. And curiously enough, it is through our studies of the hereditary element in mental and physical abnormalities that we are able to reach definite conclusions governing the development of normal minds and bodies.

We have learned, for example, that near-sightedness (myopia) is frequently an inherited defect. And this knowledge is most useful in studying the children of a myopic parent. We have learned, also, that the peculiar defect known as color-blindness is inherited from the male, but transmitted through the females of the strain. Thus a color-blind father rarely has color-blind children. But some of his nephews may be color-blind; and if his daughters bear him male grandchildren, we can predict with relative certainty that some of them will inherit the defect.

It has been definitely determined that the color in the eye is transmitted with the same exactness, and according to the same fixed laws that govern

the transmission of color to the flowers of the pea, or the coat of the guinea pig. Thus, if both parents have blue eyes, every one of their children will be blue-eyed—a useful piece of knowledge in certain legal complications. And whatever the color, if the ancestry of the parents is known, we can predict with great precision what the color of the children's eyes will be.

It is evident, therefore, that certain abnormalities of the eyes, as well as normal peculiarities, are governed by the laws of heredity about which we have some very precise knowledge. And we are certain that the other anatomical structures are subject to these same laws, even though we are unable to demonstrate the fact with the same precision as in the organs of sight. Moreover, since mental traits are simply manifestations of definite physical conditions, it follows that these traits must be determined primarily by the same laws of heredity as those governing physical conditions. In short that the Mendelian laws apply to plants, animals, human anatomy, and mental characteristics.

We must remember, of course, that mental traits are subject to the influence of environment (training) to a far greater degree than are anatomical structures. The preponderance of evidence seems to show that all such traits, whether inherited or acquired, are likely to be transmitted to the offspring, particularly those acquired traits

(or the tendency toward them) that concern the higher intellect.

Galton, who inaugurated and named the modern science of eugenics, believed that an individual inherited from his parents one-half his traits; one-fourth from his grandparents; one-eighth from great-grandparents, and so on. Many recent observers are inclined to credit the parents with rather more influence, and the more remote ancestors with less, than did Galton. The difference at most, is one of small fractions. But the significance of each of these estimates is the burden of responsibility for the future of the child that it places upon the parents—the only individuals in the line of descent over whom we may hope to have any direct control.

What we are chiefly concerned with here is the extent to which mental defects, or the tendency toward such defects, are transmitted, and to just what extent they may be corrected by training and environment.

The task of determining the effects of heredity becomes increasingly difficult as we ascend the scale of intelligence. We can, to be sure, point to successive generations of persons possessing unusual mental endowment—the Darwins, the Herschels, and the descendants of Jonathan Edwards—and no one will seriously question the important part that heredity has played in determining the superior intellects of these groups. But the in-

fluence of heredity is shown even more exactly in persons at the other extreme of the mental scale. In other words, it is far easier to predetermine mental *in*capacity, than to predict the limit of mental capacity, from the known ancestry.

We cannot predict with certainty that the children of two parents of unusual mental capacities will rise to the supreme height of genius; but we are absolutely certain that all the children of two imbecile parents will be feeble-minded without exception. And we know also that no child of unusual mental endowment will be born to parents, either one of whom is below the normal standard of intellect.

We know that the children of two epileptic parents will all be defectives,—many of them epileptics, and some of them imbeciles. The results of three such matings have been recently recorded by Dr. D. F. Weeks, as follows: "In three matings both of the parents were epileptics. Of the 28 conceptions, 2 were still-births, 3 miscarriages, 3 died before two years of age, and one (an infant) is too young for classification, leaving 19 about whom something definite is known. Of these, 8 were epileptic, 3 feeble-minded, and 8, who came from parents who developed epilepsy late in life, were tainted." By "tainted," it should be understood, is meant persons of unstable equilibrium, who are prone to lapse into mental unsoundness.

Another group observed by Dr. Weeks offers the following appalling record: "In 9 fraternities in which both parents were feeble-minded, there were 56 conceptions. Of these, 4 died before 2 years of age, and 14 were too young for classification. Of the other 38 . . . 7 were epileptic, 29 feeble-minded, and 2 were drunkards, who may or may not have been feeble-minded."

We see from these records that the mental defects represented in imbecility, epilepsy, and insanity, are so closely related that they may be transmitted interchangeably, so to speak. All of them seem to represent negative qualities—actual omissions of a positive element in the physical make-up that is present in normal individuals. And since a thing that does not exist obviously cannot be transmitted, we find an explanation of why imbecile parents, each of whom lacks certain essentials to normal mentality, beget imbecile children with deadly certainty. We find here, also, the scientific explanation of why it is not advisable for near relatives, such as first cousins, to marry, since both may have inherited similar negative qualities, thus doubling the chances of transmitting defects to their children.

Recent investigations of the ancestry and descendants of persons of unstable mental balance, enable us to make certain definite predictions. We know, for example, that two normal persons with normal ancestry will beget only normal chil-

dren. But the case becomes complicated with the introduction of a single element of marked mental instability.

Thus if a man who has been insane marries a woman of normal mentality with pure normal ancestry, all their children will probably be normal. But some of their grand-children are almost certain to be defective.

If one of the parents have been insane, and the other normal but inheriting a neuropathic make-up even from one grand-parent, half of the children will show mental or nervous instability, and all will be capable of transmitting such instability to their children.

If both parents are mentally unstable all their children will inherit a tendency to mental instability.

To summarize these conclusions, it appears that any person whose parents are both abnormal has considerably less than an even fighting chance of keeping normal under ordinary circumstances, although his case is by no means hopeless. On the other hand, the individual with one defective parent has considerably better than an even chance under ordinary circumstances; and with proper environment and training will in all probability remain normal throughout life.

It is obviously of greatest importance, therefore, (1), to protect future generations by some method of regulating or preventing marriage,

among the unfit; and (2), to follow some system of psychic training for those members of the present generation of children with neuropathic taint so as to fortify them against mental unbalance. For that character of the child's mind which we designate "stability," may be greatly increased by environment, even when handicapped by bad hereditary defects.

The child that inherits a stable mental equilibrium needs no special training to maintain its poise. It is doubtful, indeed, if anything short of actual physical injury to the brain, either by traumatism or specific disease, will ever produce aberration in such an individual. But needless to say the number of children who come into the world with such an enviable heritage, is limited; and, on account of the complexity of our ancestry, it is usually impossible to determine just how preponderant the dominant traits in any particular individual may be.

On the other hand, no children, short of those actually congenitally defective, are born with such a bad hereditary taint that they are hopelessly predestined to become insane. But it is obvious that children with bad heredity require far more careful training than those whose heredity is good.

"Mental training" should not be confused with education in the generally accepted sense. For in some instances the ordinary forms of

didactic education are detrimental, and may very advantageously be restricted rather than expanded. Manual training, followed by some humble vocation, is sometimes far better for a nervous, sensitive child, of restricted mental capacity, than the kind of education given in our schools.

In any event we must distinguish between mere learning and inherent mental capacity. One person may have great mental capacity and little learning, while another may have considerable learning without very great mental capacity. It is quite possible to increase our knowledge, but mental caliber is an inheritance that cannot be increased by training. Moreover, mental capacity, in most instances, has little to do with mental equilibrium. In effect they are separate organisms. But the man of great mental capacity is far more capable of correcting the " wobbling of his mental balance wheel " than the man who is poorly endowed, because his introspective judgment is more highly developed.

As referred to a moment ago, an exact knowledge of certain phases of heredity enables us to predetermine what the limits of mental capacity in the child of imbecile parents will be, and also the limits of mental capacity in children whose parents are of mediocre mentality. This knowledge may be of great practical value, since many of the children from this mediocre stock are

precocious in their early years, thus giving promises that they will never fulfil. In such cases an early appreciation of the child's limitations may be the means of making a useful, instead of a useless, adult.

Many of us will recognize instances of natural limitations, if we compare the ultimate attainments of our schoolmates with the promise of their early school years. In the primary grades of school the brightest and most promising pupils frequently come from the most humble walks of life—the children of the village cobbler, tinker, or day-laborer, who have neither good heredity nor inspiring environment. Apparently these children defy our laws of heredity. But if we observe them in their later years we usually find a striking confirmation of those laws. For most of them drop into stations of life scarcely above the level of those held by their parents. And in the case of the exceptions—or rather, *apparent* exceptions—we shall usually find that, despite their humble social position, one or the other parent (usually the mother, it appears) had ancestors of more than ordinary mental capacity.

I recall a typical case among my own boyhood acquaintance, the son of a cooper whose wife was the type of ordinary domestic. This boy entered the primary class in the village public school when five years old, a bright, fine-looking little fellow, a favorite with his mates and the leader in his

classes. As social lines among the children were not closely drawn, this little boy had the same advantages as the more favored scholars, going to parties and participating in all manner of childish festivities. So that, aside from his actual home surroundings, he had all the advantages of the children of better parentage.

Moreover, since his parents were fairly well to do, and greatly interested in educating their son, there was no apparent reason why this boy should not acquire a good education, and become a leading citizen in his community. But in his fourteenth year he stopped going to school for no good reason (he offered as an excuse that "he didn't like the new teacher"), loafed about as an idle boy for a year or two, finally drifting away from his classmates. Eventually he married a girl in his own station of life; and is now the village cooper, occupying about the same social position as that of his parents before him.

Those of village bringing up will recognize this type of boy. He exists in every American community; and he exemplifies the limitations of inherent mental capacity. Leaving school at an early age was significant. For he really did not dislike his teacher more than the other boys in his class—no more, indeed, than seems to be the normal amount for a healthy boy of fourteen. But he lacked that indefinable mental quality that

the "winner" possesses—a quality that is inherent, not acquired.

Judged by the success of his early school years, this boy inherited a highly organized brain. But his later actions refute this assumption. The quality he inherited was that of a rapidly developing brain, which quickly reached its limits of capacity.

"Even if all education, including that of the universities, were made free," says Hollander, "there would always be some whose organizations, even after all educational efforts have been tried, would fit them only for the position of a shoeblack or a kitchen maid."

Yet as a young child, as we have seen, this same shoeblack may have shown great precocity of intellect—is quite likely to do so, in fact. For the less highly organized type of brain, like the brain of the lower animal, often develops more quickly than the highly organized one, or may do so conspicuously in certain instances. Thus we find our cobbler's boy the brightest pupil at six, and a dullard at thirty; while an Oliver Goldsmith, apparently a dullard at ten, is a genius at forty.

It is not always so, but the higher organisms usually require more time for development; and if quickly developed by forcing, are often poorly balanced. The penalty of culture and refinement seems to be the creation of a tendency to nervous and mental instability. But perhaps this is only

another way of saying that complicated machines are likely to be delicate ones. Yet in the case of the mental mechanism it is possible to correct most maladjustments by proper training. And once this training is completed, the resulting mechanism tends to maintain its equilibrium quite as firmly as those less complicated.

There are, of course, many manifestations of the laws of heredity which as yet are not understood, and which we have therefore no means of correcting. Thus we know that fecundity and fertility are physiological qualities that may be inherited; and that these tendencies tend to decline in the higher walks of life. We do not know the explanation of this class favoritism of Nature; simply the fact. Since women in the upper circles of life are not so well fitted physiologically for bearing children, as a rule, as those in the lower walks, Nature may be thus removing the burden from the unfit. If so, we have a striking example of the antagonism between the workings of natural phenomena and those of our artificial civilization; for economically, if not physiologically, the infertile upper classes are better fitted to rear children than the prolific lower classes.

In still another physiological phenomenon we see how Nature is out of harmony with our established customs of civilized life. This is the transmission to the offspring of certain age defects. Nature has made it possible for mother-

hood to begin at a period several years before a woman may legally marry, and at a still longer period before marriage usually takes place. In this particular instance the man-made customs are better than those of Nature. For the children of extremely young mothers are likely to inherit their imperfect development and weaknesses. So that there is a good eugenic, as well as an economic, reason for our laws prohibiting early marriages.

On the other hand, we find that the children of parents at the other extreme of life—children born at the period of paternal decadence—are somewhat more likely to show defects than those of an earlier period, that is, between the ages of twenty and sixty. Here Nature has set limitations for the woman with better judgment, it would appear, than for the earlier period of life; but it would probably be advantageous to the race if some corresponding limit had been fixed for man.

There is nothing novel in this observation that the children of old men are likely to be defective. The Romans observed it two thousand years ago, and acting upon their observation, prohibited marriage to a man over sixty. But since the period of woman's immaturity and man's decadence are both relatively short, there seems little practical need for changing or adding to our present marriage laws as regards age limitations.

What we need in practical eugenics is enlighten-

ment rather than laws. As soon as we have sufficient positive knowledge about the practicalities of heredity, controlling laws will follow as a natural sequence; and such laws will work effectively. But until we have this very definite practical knowledge, supported by comprehensive enlightenment, we cannot hope that effective laws will be enacted, or enforced.

VII

Increasing Our National Efficiency

AT the present time there are a number of state and national societies engaged in the study and practical promotion of mental efficiency. Recently two of these societies, one a national, the other a state organization, held a joint conference for the purpose of disseminating as widely as possible their ultimate aim—national efficiency. At this meeting Dr. Lewellys F. Barker, of Johns Hopkins University, made some observations on unsoundness of mind as a national handicap that deserve the thoughtful consideration of every person interested in our national efficiency, which is directly dependent upon the personal efficiency of each individual. Dr. Barker's statements were, in part, as follows:

It is believed by those who are studying the subject that a proper application of the knowledge already at our disposal could gradually do much to improve the minds of the individuals who collectively make up the nation. The number of children born into the nation with defective brains could be diminished. Through a stricter super-

vision of immigrants many inferior brains could, with advantage, be denied admission to this country. Social and educational conditions could be improved so that the sum of the influences acting upon the nervous systems of children, adolescents, and adults would be more favorable to brain and mind than now.

In the narrower sense, "unsoundness" of mind refers to those graver disturbances of the mental faculties which we call insanity, idiocy, and imbecility. Idiocy and imbecility, due to imperfect development of the brain, may be the result either of bad heredity, or of serious disease in the earliest period of life. The forms of insanity which occur later in life may also be due in part to bad heredity, in part to bad environment. As examples may be mentioned the insanity of adolescence (sometimes called dementia præcox), the manic-depressive insanities with their maniacal and melancholic states, paranoia and the so-called paranoid states, general paresis, due to syphilis, the insanities due to alcoholism, and the insanities accompanying thickening of the arteries of the brain, or senility.

In the broader sense, "unsoundness" of mind is a much more inclusive term. Thus epilepsy, hysteria, hypochondriasis, and psychasthenia are, in reality, conditions in which the mind is to a greater or less extent disturbed. Even in the conditions commonly designated as "neuras-

Patients Playing Croquet at St. Lawrence State Hospital

thenia " and " nervous breakdown " the mental functions are, usually, temporarily slightly disturbed.

Again, many people seem ignorant of the fact that mind includes not alone " intellect," but also the " affections " and the " will "; to such people " unsoundness " of mind means disturbances of the reason, and it is hard for them to realize that abnormal expressions of emotion, or disorders of the will manifesting themselves in anomalies of conduct, can be evidences of " unsoundness of mind." For the medical man, however, a knowledge of the perversions of feeling and of the deviations from normal behavior which accompany defect or disease, is of the greatest importance in making diagnosis of abnormal mental states and of the disorders of brain-activity which underlie them. It is just here that the legal conception of responsibility ceases to be synonymous with medical conceptions of responsibility—a notable example of that ambiguity of language which leads so often to disputes. It is encouraging that even in law, which is necessarily and desirably conservative, the idea of " degrees " and varieties of mental unsoundness has in recent decades been gaining currency, and with it the conception of " artial," " diminished," or " attenuated " responsibility as well as that of the " individualization of punishment."

If we keep in mind the fact that conduct,

whether good or bad, is directly related to mental states—using the term mental in the wider sense to include all parts of the mind—will and emotion as well as intellect—we can scarcely fail to recognize the close relations which exist between mental unsoundness (in the broader sense) and all those forms of abnormal conduct which characterize the delinquent classes. More than ever before society is coming to recognize that the problems of criminality, of inebriety, of vagrancy, of prostitution, and of pauperism are closely interwoven with the problems of brain disorder, and that efforts directed toward the diminution of the amount of delinquency will be effective only in as far as they succeed also in improving brain quality and brain function, that is, in as far as they provide for better acting minds.

A Burden to the Nation

Unsoundness of mind is a burden to the nation in more ways than one. In the first place the economic burden is enormous. Dr. Charles L. Dana estimated, in 1904, that the actual cost of caring for the insane and the feeble-minded in the United States amounted to sixty million dollars per year, and that the loss to the nation in industrial activity due to insanity and idiocy was at least twenty million more. He believed that the care and cost of the diseased and defective

brains of the country amounted to over eighty-five million dollars annually, and that the amount was increasing absolutely at the rate of four per cent. Other investigators believe that to-day the cost is much more than one hundred millions. And these figures, bear in mind, refer to the insane and the feeble-minded only. If we add the cost of criminals and the delinquent classes generally, the expense will be seen to be stupendous.

In addition to the economic burden we must consider also the cost in human suffering, not only that of the mentally unsound themselves, but also, and more particularly, the cost in sorrow to those to whom these unfortunates are near and dear. This is a burden not measurable in money. This is a load incomparably harder to bear. Some of you who have come in contact with ill-fated families will have learned from that contact what I mean better than words of mine can tell.

Every Nation Bears a Similar Burden

It is calculated that some 250,000 people in the United States are insane. The number is not excessive when compared with the prevalence of insanity in other countries. The number of delinquents of various sorts is unfortunately large in every land. The fact is that every nation has, at present, to bear a similar burden of insanity, imbecility, and delinquency. How long will this

continue? It is impossible to say, but judging from the alertness which peoples in modern times manifest with regard to conditions making for national advantage, it seems probable that strenuous efforts will soon be made by the more advanced and cultured nationalities radically to reduce the load of mental disease and deficiency by which they are handicapped. There are a good many who hope and believe that the United States of America will be among the first successfully to move in this direction. Is it not probable that the nations that remain backward in the campaign for mental hygiene, once one or more of the great peoples have made progress in it, will run some risk of failure in the world rivalries in which they may be compelled to participate?

Can the Occurrence of the Unsound Mind Be Diminished?

Is the burden to which I have referred removable? Before answering this question it is necessary to consider the origin of mental unsoundness. Biologically viewed, unsoundness of mind means badly functioning brain. Now a brain may function badly because it has a bad structure to begin with, or because it has been subjected to influences incompatible with good functioning, or from a combination of these two conditions.

Certain qualities of brain, which we designate

as innate, depend upon heredity, that is to say, upon the qualities of the germ-plasms inherited from father and mother, but the development of the brain in the child and its functioning throughout life are dependent also upon influences outside itself, acting upon it. Such influences arise partly in the body of the bearer of the brain, partly outside his body in the environment. This doctrine, that the kind of mind an individual has (his thoughts, his feelings, his conduct) depends upon the kind of brain he is born with, and upon the external circumstances which act upon his brain, shows us the direction in which we must look for an answer to our question, Is the burden of unsoundness of mind removable?

Theoretically, the answer is obvious. We shall, on the one hand, have to see to it that children are born with brains of such inherent qualities as will make them capable of development to a certain grade of individual and social usefulness, and, on the other hand, we shall have to regulate the influences which are permitted to act upon the brains of children and adults so that the welfare of their mentality shall be favored and not injured.

Difficulties

The practical application of the broad principles involved is, however, far from easy. Provision for well-born children is the special field

of *eugenics*. The control of external circumstances is the problem of *euthenics*. But there are barriers in the way of practical eugenics which will be hard to pass, and the impediments to progress in bettering environment are familiar to every social worker. We must take care that the cause of mental hygiene is not injured by rash enthusiasts who propose panaceas, who promise the unattainable, or who fanatically urge the immediate adoption of ill-considered plans of reform. There will be plenty of distrust and apprehension, even of the most sensible applications of sound principles. It is important, therefore, that the advocates of mental hygiene shall endeavor to purge their ranks of the narrow-minded, the imprudent, and the precipitate.

A careful examination by sane investigators of the various measures which have been proposed is needed in order to ascertain which of them may be unhesitatingly advised; and only with such measures should the work of application be begun. We possess now a large body of facts bearing upon heredity and environment as they affect the brain and its functions, about which there is unanimity of opinion among men with the training which makes them competent to judge; many of these facts can undoubtedly be applied to the betterment of the brain power of the nation. The public should be systematically instructed regarding such facts. Beyond this, we should be content

with stirring up interest in the general subject and with the stimulation of researches which may bring us more definite information to be used later on.

To recapitulate, then, unsoundness of mind in its various forms is alarmingly prevalent in this and in all civilized countries. It is veritably a heavy burden borne by every nation. Its occurrence can be and should be diminished. There are difficulties in the way, but they must be overcome. For the present, we can do most by stimulating investigation and by educating the public regarding well-established facts. Surely, the work is wide and noble in its purpose. It is worthy, surely, of the devotion and enthusiasm of our most patriotic citizens; in such work they can find ample opportunity for the exercise of their highest faculties.[1]

Early Manifestations of Mental Disorders

There are two methods of making the reader familiar with the symptoms of certain well-defined and important forms of mental disorders that may at any time come under his observation. One method is to describe these conditions in a general way; the other is to select individual cases and describe their symptoms in detail.

[1] From an address on "Unsoundness of Mind, a National Handicap," delivered by Prof. Lewellys F. Barker before the Mental Hygiene Conference, New York City, November, 1912.

In the earlier chapters I have given a general survey of certain forms of aberration, as a familiarity with general conditions is desirable, and necessary, if the peculiarities presented by individual cases are to be fully appreciated. But having thus touched upon the general features of the subject, it seems advisable to consider somewhat more in detail certain mental states that are peculiarly prevalent at the present time.

In a recent address Dr. August Hoch, Professor of Psychiatry, Cornell University Medical College, presented some features of this subject in such a masterful way, and in a manner so entirely comprehensible to the general reader, that I take the liberty of quoting him at length.

Mental hygiene, said Dr. Hoch, has many points of contact with hygiene in general, not only in the sense that the bodily condition, naturally, reflects upon the mental state, but also in the sense that in the prevention of insanity a considerable portion of our task does not belong, strictly speaking, in the realm of mental, but in that of general, hygiene. It is necessary to constantly repeat that insanity is not one disease but a comparatively large number of diseases or disorders which differ widely, not only in their manifestations but in their causes; so that in everything which refers to the practical dealing with treatment and prevention we have to follow quite different principles in the different kinds of diseases. In some of

these diseases we are dealing with plain physical causes or conditions, such as syphilis, diseases of the blood-vessels, the premature wasting of brain tissue in advanced years, or we are dealing with alcohol or other poisons introduced into the body. The prevention of some of these diseases which, in part at least, have clean-cut causes, is theoretically simple and the task before us clear enough, as clear as it is, for example, in tuberculosis. That nevertheless even in these disorders the task is a difficult one, is due essentially to such human factors as ignorance, selfishness, and prejudice.

In the organic mental diseases the early manifestations are much more an integral part of the disease; they indicate the beginning of the actual breakdown, they represent the first indications that a severe brain disease has started. On the other hand, in the other group of mental disorders we find frequently even in early childhood, or at the age of puberty, or during adolescence or later, here and there certain peculiarities of character, certain defects of self-management which we must regard as danger signals and which should be taken much more seriously than is commonly the case. Such evidence we psychiatrists have learned to recognize, above all, through careful inquiries into the life histories, the characters, the habits of those individuals who are brought to us after the mental breakdown has occurred. And the conviction has more and more been borne in

on us that the public and, above all, the physicians have not paid enough attention to such signs, and that a better knowledge of these early danger signals should be useful to all those who have to deal with children and young people.

Of course one might ask then, whether we have a right to speak of such danger signals as early manifestations of insanity at all. It might be said that these are essentially defects of constitution, of make-up, of habits, and moreover, defects which need by no means always be followed by insanity. And it might further be said that, in treating of these more particularly, we are really not talking on the subjeet which was announced. But whether or not we should regard such signs as true early manifestations is, after all, a purely academic question which sinks into insignificance beside the essential question, namely: what is of practical importance? and from that point of view it seems to me that these *earliest* signs deserve more particularly to be pushed into the foreground. However, they undoubtedly represent unhealthy ways of living, and, though they may be, and undoubtedly are in part, the expression of a poor endowment, there is, we are convinced, much in them which, through better understanding, through the fact that our attention and our studies are directed to them, we shall learn to manage better. While there has been a certain tendency, on the

one hand, to disregard these earliest manifestations of insanity, there has also been, on the other hand, a tendency to emphasize unduly heredity and degeneracy as unalterable factors in the individual which lead to a somewhat fatalistic sizing up of the situation. There is much which goes to show that such a view is one-sided, and we hope that the future will prove that it is unnecessary.

Two ways are open to treat the subject in hand. Either we might give you a *summary* of observations which have been made in regard to these earliest signs of lack of mental balance, or we might briefly consider some concrete instances, some living examples of individuals, some life histories which illustrate definite defects which were present for years or throughout life, and which show clearly that the breakdown did not come out of the clear sky but was rather an eventual outcome of inadequate self-management and inadequate management by the environment—to be sure in addition to a certain weakness inherent in the individual. I shall choose the second course, and briefly make you acquainted with some actual observations.

The first patient is a young woman, about whose early life we are fairly well informed. We are told that even as a child she was hard to manage and took advice badly. While I cannot find any very concrete examples or instances under which this behavior manifested itself, the notes give

enough to show that the difficulties which the parents and teachers experienced in managing the child were not due to any very active traits on the part of the latter, not to that kind of boisterous childish vivacity which is seen in normal children who are hard to manage; but rather to a passive resistance. She got along pretty well when left alone, but even simple adaptations were difficult for her. Thus it troubled her when her things were touched, or when she was interfered with in any way. Her reaction then to such interferences was, however, not an aggressive one from which a certain healthy shaping of the situation might be expected, but a rather fruitless irritation, and more particularly, as is stated, a "going off by herself." Again, and quite consistent with what we have said, we are told that she played little with other children, was apt to cry when things did not go just her way, and then left her playmates. It is also specifically said that she was not liked by others. Children have a quick appreciation of barriers which another child, or for that matter an adult, erects about him, and shun that kind of personality. In company she was silent, took no part in what was going on, and very often left the room. She seemed ill at ease and bashful. But she was not stupid, on the contrary rather above the average in intelligence, and she worked hard at school and had good marks.

At sixteen she became over-religious, a change

which was not accounted for by anything that happened in her environment. Then came a year at business college, which, so far as the work was concerned, was also passed satisfactorily, though her general traits did not change. But when the time came to use her knowledge, that is, to change from a mere receptive situation, which makes infinitely less demands than the much more difficult task of stepping out into the world of responsibility, then she was unprepared and shrank from it; instead of taking positions which, evidently, under the force of example and promptings from home she did seek for a time, she found fault with every one, and remained inactive. She married at eighteen, and after the birth of the first child developed a serious mental disorder, from which she has not and will not recover.

A somewhat similar situation is seen in the following patient, though here the gradual changes are more plainly shown. This patient is described as a girl who was also shy and retiring, inclined to be afraid that what she did she did not do right, afraid that she was not obedient enough, and she was apt to tell other children to be more obedient. Though she had the opportunity, she did not play much with others, but preferred to be by herself, and somehow she was always unable to get into real contact with those about her and to derive satisfaction from this. Yet she, too, was quite intelligent and good at school.

When puberty came on, with its physical changes, she was unable to take this naturally and had warped ideas about it. At fifteen, though she continued to look healthy and was a rather strapping girl, she began to sleep badly and appeared more absorbed. She also became fault-finding, dissatisfied; and even when changes were made according to her wishes, this did not bring satisfaction and she could not be aroused. This had been the case during the summer. When she went back to school it was soon found that she worked badly, but it was months before the mother made inquiries at the school, and then she was told that the child acted funnily, got rattled, and was the laughing-stock of the class. She was taken home.

Then attempts were made to divert her by taking her to parties and theatres, which, however, in her condition, did not improve matters. Again some months passed without any one suspecting anything more serious, until suddenly she made a strange remark. But this was soon forgotten. and when vague thoughts and quandaries appeared about the meaning of life and death, about the universe, and so on, they were not regarded as especially important or strange in a 15-year-old girl. However, the catastrophe was now not very far off. After a while she suddenly turned against her mother, spoke of the devil being after her, and finally got into a state of frenzied excitement. When she was finally brought for treat-

ment she was in a stupor-like state in which her interest and her contact with the environment were extremely interfered with, a state in which she had completely turned inward, so to speak, and from this she has never and will never emerge.

Somewhat different is the following case, that of a girl whose early history presented nothing very striking. It is said, however, that she always objected to control of any sort, but she got along fairly well until some six or seven years before the marked mental symptoms appeared, that is to say, she got along moderately well until her nineteenth year. At that time she went to a Normal school. There she was moody and unnatural, was given to all sorts of fads about her diet, which is always to be looked upon with some suspicion. She felt tense, complained of cold feet and various digestive disturbances. In order to escape this, as she herself says, she lived a rather dissolute life for a time but, of course, without getting any real satisfaction from it. Later she began to study music but developed again what was called neurasthenia, was dissatisfied, uncomfortable, tense. Again, she made faddish attempts at treatment, this time by all sorts of absurd relaxation exercises which, of course, did not go to the root of the matter, and at the same time she lived in an environment in which vague thoughts prevailed, while balance and robust common sense

were lacking. Suddenly the outbreak came when she proposed to a man whom she knew but slightly. She rapidly lost weight, thought she was married, and her conduct, in other ways, was absurd.

The following instance I desire to speak of, not because the patient showed similar traits in her earlier life to those already mentioned, but because it is an excellent example to show how poorly understood were the danger signals, even when they appeared in a very marked form, and just how that step was taken which, above all, should have been avoided. The situation was this: A predisposed girl begins to show mental symptoms when she becomes engaged. Nevertheless she is allowed to marry, and upon this the psychosis at once breaks out full-fledged. The patient is a girl of 22. She was not very bright at school; sometimes when the teacher asked her questions she gazed at her without answering. But on the whole she was not very peculiar, not decidedly unsociable. From the seventeenth year on, however, a change came over her and she then became more reticent and less sociable. Seven months before admission she became acquainted with a man, is said to have become very much infatuated with him, and got engaged after a short acquaintance. Soon after this she began to show an indefinite fear and, having lived away from home, she now returned to her parents' house.

She soon developed fancies, thought her fiancé might come after her with a knife. She had crying spells without saying why, was morose, and asked her sister to chop her head off.

In spite of this plain beginning of the psychosis, as we have said, she was married some weeks before admission, and very soon got much worse and developed a grave psychosis from which she will not recover. Now, any one who is at all observant would have been struck by the fact that definite symptoms appeared when she became engaged. This should have been a warning, but of course it was not a warning because no attention is paid to such things, very often not even by physicians. To a psychiatrist the situation would have been very plain, for not only did she show mental symptoms, but mental symptoms which directly pointed to the fact that they were connected with a lack of adjustment to this marriage, although this, to be sure, was not conscious.

The popular belief that marriage cures nervous and mental trouble, a belief which is not only common among the laity, but also among doctors, is a dangerous one. It is precisely a question of defects of sexual adaptation which are so common among these individuals, and therefore we should do everything we can to eradicate this belief. That it exceptionally holds good must be admitted, but usually the opposite is the case, and I could cite many instances in which the advice to marry

was full of serious consequences in individuals who were predisposed. The psychosis broke out, as was to be expected, with a peculiar attitude towards her husband and she was afraid of him and began to doubt whether he was her husband, and in other ways showed that she was utterly incapable of this adaptation which was demanded of her by the marriage.

These characteristic cases must suffice to show some of the traits which patients who develop insanity presented long before a breakdown was thought of. It is surprising how rarely we find that any such calamity was expected, even when the indications became only too plain. The stories which I have presented refer to that form of mental disorder which we call dementia præcox, or, at any rate, to disorders closely related to this. I shall presently try to make clear what is meant by this disease. For the present it seems not out of place to state that the yearly admissions to our hospitals which belong to this general group, represent nearly a quarter of all the cases admitted, and to further state that it is a conservative estimate when we say that the New York hospitals for the insane at the present moment take care of about 15,000 such patients, that is, half the inmates of all the institutions.

And now as to the meaning of this condition: We are becoming more and more convinced that some mental disorders are reactions of a similar

nature, as we find in normal people; and, as in the normal these reactions to life are adjustments, so are these mental diseases attempts at adjustments, but no longer adjustments which take account of the facts, or of the world as it is, but fictitious adjustments— they are poor instinctive attempts at getting satisfaction which life did not furnish, partly on account of the inherent difficulty in the individual to accomplish proper adaptations to the difficult business of life, but partly also, as we have said, on account of often unnecessarily poor self-management on the part of the individual, or defects in the environment. Hence, we are learning to understand many even grotesque manifestations of insanity.

We can, when we are able to penetrate into the devious trends of thoughts and feelings of our patients, see a meaning and a purpose in them. But it is precisely this which gives us the conviction of a continuity between the personality, with its faulty self-management before the mental breakdown, and the disease proper. But it also gives us the conviction of a continuity of these forms of insanity with milder forms of mental disorder which are not called insanity, or with neurasthenic and nervous states, or with the internal disharmonies of many so-called normal people. The nervous person of any kind is somewhat out of touch with his environment and does not get his full satisfaction out of life; we find

that those natures are most in danger of breaking down with dementia præcox in whom the interference with the proper touch with the environment is most marked. They are natures who turn away from reality, who shun the more difficult adaptations to life. And, when we analyze the symptoms of this disorder, we find that they are essentially the expression of this attitude of turning inward and the growth of fancies which invariably result when the interest in the real world stops.

We have seen that the chief early manifestations in this group of diseases, the chief characteristics of the persons, were those of reticence, seclusiveness, stubbornness, brooding, sensitiveness, a certain suspiciousness, together with oddities and strange behavior. Such peculiarities, which have their causes not only in unalterable innate personal traits, have a tendency to grow. It is not surprising that such persons should be found unprepared when adaptations to new situations are required through internal or external changes as those which come with puberty, with stepping out into life, with marriage, etc.

Dementia præcox is not the only disorder of which I wish to speak. A similar number of admissions to the hospitals is furnished by those forms which we call mania and melancholia, disorders which may be regarded essentially as exaggerations of normal emotions. These diseases are

less serious. They are apt to begin much more abruptly and, as a rule, they lead to recovery; though relapses are common which, however, again tend to the reëstablishment of the normal state. A considerable number of these disorders occur in later life, especially melancholias. In harmony with the better outlook of these disorders we find the fact that the individuals who develop them are much more natural, though we find among them many who habitually have a tendency to look on the dark side of life, or we find slight traits like those mentioned above, or nervousness, or emotional instability, or other traits.

I cannot refrain mentioning here a case which belongs in this group, a case which may serve to show how an early treatment would have avoided more serious consequences. The patient is a woman of 31, who, though not very bright, was a conscientious worker in a shop. She always worried a good deal, cried easily. She was called a home-body and had little association beyond that of her mother. A young man called on her occasionally for a number of years. For a year he did so more frequently and finally spoke of an engagement. Nine months before admission the patient had found out that he was already engaged. She was much upset, cried, walked the floor, slept poorly, said she had nothing more to live for, and was unable to work. Now, this patient should have been placed under treatment at that time

when the condition was one of a simple depression well accounted for. Instead of this she was kept at home. She did improve a little, but friends kept telling her all about the man's doings, that he was married, and so on, and her worry again increased, and finally the mental disorder took a more serious form—a sudden change came over her, a change which she expressed by saying that she had no feeling.

Under observation she complained essentially of this change, said she was not herself, her body was changed, her head empty, and she was very much agitated. This is a well-known condition and one from which the patient will finally recover, but is one which is more serious than the one she had presented at first and one which is apt to last much longer. It could plainly have been avoided if the public fully appreciated that treatment should be instituted earlier in the attack and not only when the condition is so advanced that we have gone beyond the point of elasticity, or that at any rate very much less can be done than would have been possible at first. The case teaches some other lessons, but I fear it would take too long if I were to go into details.

And it is not insanity only of which we should speak in this connection. We have already mentioned the fact that there is a continuity between these forms of insanity and milder abnormalities. Here all sorts of nervous symptoms should be

mentioned: moodiness, depression, insistent doubts and uncertainties, abnormal lack of decision, unfounded suspicions, uncalled-for feeling of being at a disadvantage, feelings of inferiority, exaggerated anxiousness and timidity, sexual uncertainties and doubts, visionary tendencies, peculiarly warped mental attitudes and many oddities of behavior, etc. Although many such people do not break down, they often suffer enough. Think of the colossal amount of energy which is expended in their struggles and taken away from useful activity, and think of the trouble which some of them make in the world and the hardship which they impose upon others, and yet many of these traits are often regarded, I might say, as legitimate traits, or at any rate as traits which are the expression of such and such a personality, and therefore are looked upon as settled.

It is not within the scope of a paper which is supposed to call attention essentially to the early manifestations of insanity, to speak at length of remedies. And, moreover, I could not offer any simple means of combating all these ailments of which I have spoken this evening. They are the outcome of many internal and external factors and each case is a problem by itself. All treatment, even that with medicines, consists in the application of two principles—that of training and that of rest. It is not different from these nervous conditions. Here the principle of rest, or

of relieving the strain, consists in getting below the surface, in trying to find out what are the real causes of these peculiarities of feeling and of behavior, what are the conflicts, the internal attitudes and ideas of the individual; and the same principle also takes into account the correction of wrong influences of the environment.

Reconstructing the Mental Attitude

The principle of training, on the other hand, is represented by the teaching of healthy living *under reconstructed conditions.* All this is a task which may be quite laborious and which requires skill and knowledge. But one thing is certain and that is that not only are too few attempts made in this direction, but the danger signals as a rule have not even been recognized, or have not been regarded as such, and nothing at all has been done to modify them. We have looked upon them, as I have said, rather as legitimate traits which this or that person also presented more or less, without coming to serious grief. What must be developed is a feeling that all these traits are important and are to be taken seriously. We must learn that even slight abnormalities of self-management or conduct are matters which need to be dealt with, as matters which not only interfere with the full development of the personality, of which we are all so much in need, but which later may lead

to more serious consequences, and while it is difficult to give simple uniform ways of handling these conditions, they will nevertheless at times be found to be much more manageable than would seem, especially when taken early. Many people often stand at crossroads; in one direction lies health, in the other nervousness or perhaps insanity. Many turn in the right direction from innate sense, others turn the other way because they are constitutionally doomed. But we are sure that many could be guided better if we only paid more attention to these nervous conditions, and would be thoroughly impressed with the fact that they are wrong, to say nothing of the necessity of getting away from a certain admiration of some of them. It might of course be justly stated that much good also comes from people who have certain nervous tendencies, indeed that it is in part these tendencies which create the good. But this is true only of those individuals who find, from their disharmonies and conflicts, a way toward altruistic or artistic pursuits of value, therefore a way toward adaptation after all. This of course is the cause for our admiration of nervousness which for that reason has a certain justification, but that should not prevent us from pointing to the dangers as well. This is one of the tasks of the mental hygiene movement—to call attention to these conditions. What the future will have to bring us is the development, gradual to

be sure, like all healthy developments, of provisions for a better management of not only the intellectually defective, but the nervously abnormal children. But mental hygiene should begin even earlier in life, namely, with the infant, and we should constantly insist on the importance of the early years of life for the formation of character and modes of reaction, and upon the necessity of paying much more attention to these years of infancy and early chilhood from the point of view of mental hygiene.

But we need also much further study along these lines, and intensive occupation on all sides with the question of nervousness and peculiarities of behavior. We need more and more a psychology which will occupy itself with character formation and with the individual and its struggles and disharmonies, and, on the part of the school, an appreciation that dry knowledge is not the only thing that is needed, but training to efficiency, and efficiency on the level adapted to the individual, at the bottom of which lies adequate self-management.[1]

Syphilis and Insanity

The relationship of venereal diseases to certain forms of mental unsoundness has been referred

[1] From "Early Manifestations of Mental Disorders," an address delivered by Dr. August Hoch before the Mental Hygiene Conference, New York, 1912.

to somewhat at length in an earlier chapter. But as the subject is one of the most important in the field of mental hygiene, it merits the fullest consideration, particularly since recent discoveries in science have given us the means of detecting the presence of the specific germs that cause the initial disease, and of eliminating them from the system.

At the recent Mental Hygiene Conference, Dr. George H. Kirby, of the Manhattan State Hospital, presented some features of this subject in a way that it has seldom been presented to a body of laymen by an acknowledged authority. With Dr. Kirby's permission I have incorporated a portion of this important paper in this chapter.

In referring to syphilis and insanity Dr. Kirby says: The subject deals with one of the most important, as well as one of the most clearly defined, problems to be found in the entire field of mental hygiene. It is a problem, however, which, in common with all others that come closely into relation with the sexual life, has been always tabooed as a subject for frank discussion in open meetings, and likewise strictly excluded as unfit to be mentioned in the public press, except under veiled statements or by mere allusion.

Physicians have, therefore, in the past had little opportunity to present to the public even the simple established facts of the case made out against syphilis as a cause of insanity. Happily there

are at the present time many indications that this "hushing up" and "keeping quiet" policy will not much longer block the way against the enlightenment and proper education of the people regarding the part played by this venereal disease in the production of mental unsoundness.

In order to approach this whole subject of the syphilitic caused diseases fairly one must guard against a certain attitude, founded on error, yet all too prevalent in the popular mind: many intelligent persons not only have no interest in the social problem of syphilis, but they feel little or no sympathy for individuals who suffer as a result of syphilis. There is often something of the feeling that these people are afflicted because of wilful transgression of religious and moral laws. Many think only of the disease as something utterly loathsome, associated always with vice, crime, and the lowest sort of moral depravity. This, as every physician knows, is untrue. While prostitution is the chief means by which syphilis is disseminated, its victims are claimed in every stratum of society from the highest to the lowest. Among the men admitted to the hospitals whose insanity is due to a syphilitic infection, 75 per cent. of them are married men, most of whom, if guilty of transgression in earlier years, have long since mended their ways and settled down to a moral family life.

Among men, particularly young men, ignorance,

thoughtlessness, submission in a moment of weakness, and the influence of suggestion by companions, account for the wrecking of many a life. Temptation comes to almost every man. Ignorance and a wholly wrong attitude towards the sexual instinct make the fall easy for many. One is amazed to hear young men speak lightly, or even jokingly, of venereal disease with no knowledge of what the results may be if this disorder is once contracted.

I could quote to you many cases from my personal knowledge of young men and even boys who acquired syphilis more or less accidentally without ever having been instructed or warned of the danger to which they exposed themselves. We have a patient in the hospital at the present time whose insanity is due to syphilis contracted when he was fourteen years old, at an age when he knew nothing of venereal diseases and had no realization of the possible consequences of an act which he was induced to commit by a person he accidentally met.

It is not within the scope of my paper to discuss the wider social aspects of syphilis or the best means of combating the evil, nor shall I attempt to recount the multitude of diseases which it causes and the consequent suffering and misery which it brings to innumerable homes and families. My task is to present to you briefly what we now know regarding the damage done by

syphilis in one particular direction, namely, in the production of mental unsoundness. It will, however, be necessary for me to say a few words regarding the nature of syphilis and its mode of transmission in order that you may appreciate fully the problem which confronts us.

A Germ That Causes Insanity

Although this disease has been described and studied by physicians for centuries, its true cause has only recently been definitely established. Syphilis is now known to be an infectious disease caused by a germ, a micro-organism, which has been identified and its characteristics well studied. Syphilis spreads in two ways: it is transmitted from parent to child or it is communicated directly from one person to another during the sexual act. Occasionally, one might say rarely, it is communicated by accidental contact in other ways. On the parts of the body exposed to the infection the signs that the poison has entered the system may be so slight as to pass almost unnoticed; if, as is usual, a small sore occurs it tends to heal up rapidly with little indication of the direful results which may follow. The germs having once gained entrance into the system, any part of the body or any organ may later be attacked and partially or completely destroyed. By appropriate treatment we may, however, as a

rule, control the symptoms that arise within the first few years after infection takes place, and it may appear that the disease has been eradicated from the body. It is, however, well-nigh impossible to say that this has been actually accomplished, for the syphilitic germs possess the remarkable property of lying dormant for a long space of time, often many years, and then beginning to cause trouble again.

This peculiar tendency of the syphilitic germ to remain quiescent for years while all obvious symptoms of the disease disappear, served to keep us long in the dark regarding the true cause of some of the most serious nervous and mental troubles with which physicians have to deal. It was naturally difficult to establish a connection between a nervous or mental breakdown 10, 20 or 30 years after a venereal disease when, during all these years, there had been few, if any, signs that the syphilitic poison was still in the system. Fortunately for our better understanding of these diseases, which develop years after the initial infection, the missing link in the chain of evidence against syphilis has recently been supplied and we can now present conclusive evidence, whereas we formerly spoke merely of probabilities and could not prove what we suspected.

The proof was furnished by the discovery of a very delicate blood test now known the world over under the name of the physician who devised it

as the Wassermann test for syphilis. By this test one can, through examination of a few drops of blood, determine whether or not any trace of syphilitic poison exists in the body of the person tested, and this in spite of the fact that the syphilis may have been acquired many years previously and the individual, at the time of the test, may present no visible symptoms of syphilis itself.

Smouldering Fires

Among the syphilitic diseases, there stands out one in particular that, above all others, commands our earnest attention, first, because of its great frequency and, secondly, because it is not amenable to any known treatment; the result always being death and that usually within two to five years after the disease is recognized. This affection is variously known as paresis, general paralysis, or softening of the brain.

Paresis, or as it is sometimes called, par-é-sis, develops most often 10 or 20 years after the original syphilitic infection, and as most individuals who contract syphilis do so in the earlier years of manhood or womanhood, paresis will appear most often between the 35th and 45th years, just the age at which one is considered to be in the prime of life. Thus we find that apparently robust, normal individuals are stricken in the midst of an active life. The one attacked may

have almost forgotten the syphilitic infection of years before and the patient as well as the family and friends are sure to attribute the breakdown to some more recent occurrence, such as overwork, business worry, intemperance, accidental injuries, etc., things which we now know can never alone produce paresis.

The disease comes on, as a rule, slowly; the finer feelings and the higher mental functions suffer first; slight changes in disposition or character are noticed, the ethical sense is impaired, reason and judgment are insidiously undermined, and very often, before the family or friends are aware that actual mental disease exists, the afflicted individual has committed acts which too often extend in their consequences far beyond the patient himself, and may bring ruin upon his family and others. As the mental symptoms become more marked the patient's mind is apt to be filled with all kinds of impossible schemes and extravagant ideas, the judgment is abolished and the memory is slowly lost, so that the patient may finally have little knowledge of his past life. In the terminal stages the greatest possible degree of mental decay is reached—the patient being reduced eventually to a mere vegetative existence, with little or nothing left to show that the sufferer was once an intelligent being. Accompanying this mental deterioration there are well-marked physical symptoms; the limbs tremble, the power of

speech is impaired, convulsions may occur, the patient becomes bed-ridden from weakness or paralysis, and so remains until death finally closes the distressing scene.

The post-mortem examination of the body shows us that the syphilitic poison has caused widespread damage to the brain, the result of a chronic inflammatory condition accompanied by softening and shriveling of the brain matter itself.

Recently a very important remedy known as "606," or Salvarsan, has been brought forward as a cure for syphilis. It appears to have a very remarkable effect in checking various syphilitic symptoms, particularly those that develop soon after the primary infection takes place, but unfortunately we find that it is of absolutely no use in the treatment of paresis.

During the past year 758 patients entered the New York State hospitals suffering from paresis, which number is equivalent to nearly 14 per cent. of all the 5,700 new cases admitted. These 758 persons represent only a part of the cases of paresis that develop in the population, as many patients are sent to private institutions, others are kept at home, and some die in general hospitals. Among all the admissions to the State hospitals we find, with one exception, more cases of paresis than any other single form of mental disorder.

Paresis is much more frequent among men than

among women—three times as many men as women are admitted suffering from this disease; we find that 18 to 20 per cent. of all men admitted are suffering from paresis.

It is also known that paresis is much more prevalent in cities than in country districts. Among all the admissions to the State hospitals we find that 22 per cent. of the men who come from cities have paresis, while only 8 per cent. of those who come from the country have this disease. The women show a similar difference, as we find twice as many cases of paresis among city-women as among country-women. These figures show clearly that syphilis is more frequent where the population is most compact.

Another interesting and important fact is that paresis is much more prevalent among the foreign-born population than among the native-born inhabitants. In New York City, for instance, we find that when we compare the foreign-born with the native-born population, there are proportionately twice as many cases of paresis among foreigners as there are among the natives.

Last year 627 patients died of paresis in the New York State hospitals. As had been pointed out by Dr. Salmon, this large number of deaths takes rank with the mortality rate of some of the most dreaded diseases. Typhoid fever is one of the most feared and widespread of the infectious diseases, yet in this State paresis causes over half

as many deaths each year. Paresis claims more victims annually than does erysipelas, one of the most common of infectious diseases. Cancer of the breast, a frequent and malignant disease, causes yearly no more deaths than paresis. Statistics show that in this State more deaths result each year from paresis than from dysentery, malaria, smallpox, tetanus, and rabies all combined.

These hundreds of cases of paresis that stream into our hospitals every year represent only a part of the damage that syphilis causes to the mental health of the community. Thanks to the Wassermann blood test and other investigations, we can now definitely state that syphilis is responsible for many other conditions of mental unsoundness.

The Penalty of Inherited Syphilis

In the first place, some very interesting studies have been made on the families of paretic patients. We find that when either the father or the mother suffers from paresis many other members of the family may be infected with syphilis, and furthermore, we find that a surprisingly large number of children in these families are feeble-minded, nervous, or in other ways abnormal. Dr. Plaut examined a group of 100 children, the offspring of cases of paresis, and

found that 45 per cent. were plainly damaged mentally or physically or in both fields; the blood test showed that one-third of these 100 children had the syphilitic poison in their systems.

Another investigator found in a group of 139 children, the descendants of parents who had syphilitic nervous disease, that over 25 per cent. were definitely feeble-minded or affected with some serious nervous disorder.

Other studies indicate that there exists a close relation between syphilis and many of the hitherto unexplained cases of feeble-mindedness, including idiocy, imbecility, infantile paralysis, and some forms of epilepsy. While the question is not yet settled, it appears that syphilis is the real cause of many of these cases of mental defect in children.

A striking example is furnished by the record of a family studied by Dr. Plaut. A thirteen-year-old schoolboy was brought to the hospital because he had a convulsion while at school. Examination showed that he was a case of juvenile paresis in the early stages, the blood giving the usual indication of syphilis. His parents were questioned, but both denied positively that they ever had syphilis. The father would not allow his blood to be examined, but the mother permitted the examination, and she was found to have syphilitic blood, although at the time of the test she appeared to be in good health and claimed to have

no knowledge of ever having had syphilis. The four other children in the family were then examined. Two were found to be feeble-minded and the blood test was positive for syphilis. A third child had previously been treated for a syphilitic skin disease, and the blood test was again positive. A fourth child appeared well and the blood test was negative. It was thus found that in a family of five children the blood test was positive in four, and three of these were mentally abnormal. The mother also had syphilitic blood, although she did not know that she had ever contracted syphilis, while the father, who was probably the cause of all the trouble, would not submit to a test.

Such observations as this are particularly instructive, because if the family had not been carefully examined and tested for syphilis, the true reason as to why the children were mentally abnormal would not have been discovered.

In another group of cases of mental disorder due to "syphilis of the nervous system," one finds that the disease has directly attacked the coverings of the brain and the small blood-vessels, and inflammatory deposits occur which do serious damage to the brain substance and consequently impair the mentality.

A very frequent disease is arteriosclerosis, or hardening of the blood-vessels, a certain number of cases of which are caused by syphilis. When

the blood-vessels of the brain are attacked very serious mental decay may result. We thus find that many middle-aged or older persons may suffer strokes of paralysis or have convulsions and become insane or demented as a result of the injury that syphilis does to the arteries of the brain.

When we know the grand total of all of these conditions of mental defect and disease, as represented by the hundreds of cases that are received every year in the State hospitals and institutions for the mentally defective, we do not even then gain a correct idea of how great a menace syphilis is to the mental health of the nation. Still the figures which I have quoted to show the actual number of cases of insanity due to syphilis admitted to the State hospitals, should impress every thoughtful citizen with the urgent need of lending his or her efforts to the solution of this problem. As matters now stand, we know that just as many hundreds of cases, and more, will be admitted to the State hospitals next year as in the year now passing.

Every parent and teacher, every spiritual and moral adviser, should not fail to see that every youth is warned and properly instructed before the temptations of the world are faced.

Physicians are almost unanimous in their belief that the first great step will be taken toward the prevention of insanity from syphilis and the con-

trol of the disease itself when we begin to treat syphilis as we do other infectious or contagious diseases. We protect the community against smallpox, diphtheria, scarlet fever, tuberculosis, and other communicable diseases by reporting them to the Board of Health and fighting them by quarantine, isolation, disinfection, and all other means within our power. Why should syphilis, a dangerous, contagious, and infectious disease, be excepted? For the protection of the community every person infected with syphilis should be registered with the health authorities and proper means taken to limit the communication of the disease to others. For the protection of families and for the ultimate improvement of the race, no person who has had syphilis should receive a marriage certificate unless the blood test proves that the poison is no longer in the system.

When we deal with syphilis in this manner, then will the number of cases of hopeless insanity begin to decrease, and fewer feeble-minded children will be born into the world.[1]

Educational Methods and Mental Efficiency

The question of mental efficiency is determined by two great factors: natural endowment, and education. The first is entirely beyond our con-

[1] From an address on "Syphilis and Insanity" delivered by Dr. George H. Kirby before the Mental Hygiene Conference, New York, 1912.

trol in the present generation of children. But the second is well within our power to direct.

Until recently educational methods have been left largely in the hands of lay-teachers engaged in the didactic work of the schoolrooms. But it is obvious that these teachers should include in their special instructions the general features of mental hygiene that have been investigated by persons specially engaged in that part of our education that applies to mental stability. This can only be done in a general way, of course, but even such general teaching should be most valuable as an adjuvant to the special school training.

Dr. Stewart Paton, of Princeton, recently indicated the general attitude that teachers should cultivate, based upon observations of persons who have developed mental peculiarities largely through lack of this very kind of education. His attitude toward the subject is given in the following passages from one of his recent addresses:

How much meaning there often is in a single word! It may decide great issues, epitomize our hopes or fears or express our entire philosophy of life. Think what the term "insanity" represents to the minds of the majority of people; apprehension, fear, despair—a very gloomy background. There is one lesson that should be remembered, namely, the possibility of discarding the word insanity and substituting for it the term maladjustment. We have been told that life is an

adjustment. As long as the process of this adjustment between the individual and environment persists, life is present, but with its cessation death intervenes. Disease is an imperfect adjustment of which mental disorders are a special but not specifically different type. By substituting for insanity the word maladjustment we have made a great advance.

By this change in our point of view we have also unconsciously recast some old and difficult problems in a new form. Think how the whole educational problem now stands out clearly before us. Where once we were blindly groping our way we now follow a plain, straight path.

What is the function of education? What is the first duty of the teacher? Does it not consist in an attempt to estimate the adjusting capacity of every student and then try to help him or her find a place in life where adjustment is possible? Think of the figures on the charts showing the incidence of insanity in the United States. At the first glance we seem to be looking at a very dark picture. I do not think, however, that there is any justification for a gloomy outlook. Remember our substitution and then reflect upon the actual significance of these figures. Do the numbers not indicate that there are so many individuals in the community, who have been brought by defective heredity, undesirable social conditions, or a poor education into a position where they

cannot readjust? Why do teachers not realize that they should assist students to find positions in life where it is possible for them to work easily, with pleasure, and at the same time retain their capacity of readjusting to meet the conditions of life. We should not dodge the issue. Our present educational system is to a large extent responsible for many of the figures recorded on these charts. If we analyze the statistics carefully there is no reason to become pessimistic, while there are excellent grounds for facing the future with hope.

What then is the spirit of the whole movement? Can we not sum it up in a single word? It seems to me that such a course is possible. I should have been very glad to have seen the word teaching dropped from this programme and the word learning substituted for it. The spirit of the Mental Hygiene campaign is one of learning, not of teaching. Dogmatic forms of belief as inculcated by many teachers have unfortunately led directly to many cruel practices. Philippe Pinel was fortunately a great learner. His spirit of inquiry led him to affirm that insanity is a disease of the body not specifically different from other physical disorders. Practical results of inestimable value followed close upon his acceptance of this fundamental principle. Henceforth the insane were to be treated as patients and not as prisoners nor as those possessed with a devil. When Pinel stood in the old hospital in Paris and

ordered the chains to be removed from these unfortunate persons, he opened up a new epoch in the history of humanity. He did a great deal more than accomplish a great practical reform, as he set people thinking along new lines. He formulated many problems, that are of interest to teachers, in a very striking manner. In his remarkable book "Nosographie Philosophique" the great number of volumes adorning the shelves of libraries are contrasted with the meager record of exact observations conducted upon individuals. Possibly he had in mind the numbers of physicians and laymen who did not consider insanity to be a disease simply because writers of books had entertained an opposite view. May we not all pause and think about the valuable lesson expressed in this reflection! He appreciated the spirit of learning and refers to its importance in many interesting passages. His observations taught him that there were not specific differences between the activities of the sane and the insane. "In nervous and mental diseases," he declared, "I see the key which will unlock the secrets of human nature as they are recorded in history and moral philosophy."

In order to understand the activities of a normal person we must often carefully study those of the abnormal individual. The faculties of the former are, as a rule, so perfectly balanced and well adjusted that it is difficult to analyze

them. Disease sometimes comes to our assistance in the process of analysis and brings out prominently certain symptoms, thus giving a clew to the interpretation, not only of the activities of the insane, but which lays bare for us the secrets of our own nature.

Is it not strange that more than two thousand years have elapsed since the realization of self-knowledge; "Know thyself," was represented to be the highest attainment for which human beings could strive? Mankind has waited for centuries before any organized effort was made in this direction. Unfortunately the spirit that Bacon deplored is still one of our chief characteristics—the desire to theorize and to dwell on the top of a mountain instead of profiting by a descent to the plain has thwarted our efforts to know ourselves. For centuries man has reiterated certain false doctrines in regard to himself, and the din or argument has served to fix the ideas in consciousness. He has seldom taken the trouble to see whether these notions tallied with the results of actual experience. The mental hygiene movement represents an organized movement to know ourselves, in order that the knowledge obtained may be applied to making our lives happier and more efficient. There are one or two ideas of importance that should be kept constantly before our minds in the discussion of this subject. In the first place we must try and incline people's minds

to receive the truth. Fact must be separated from fiction, and to be capable of distinguishing between the two it is essential that students should be trained to associate the study of biology with the discussion of the human activities. It will be a very fortunate thing when some university in this country receives the endowment necessary to establish a great department of biological psychology entirely independent of the restricted influences imposed by speculative philosophy.

One of the most fertile ideas of biological science is that there is an unbroken and uninterrupted chain linking the activities of the lowest with those of the highest organism. If we wish to understand our own complex activity it is often necessary to return to the study of the simplest organisms in order to comprehend the mental adjustments of the human individual. There is still another chain that science has shown to be unbroken, by establishing the fact that there is no specific qualitative difference between the thought and conduct of a normal, healthy individual and that of the patient afflicted with alienation.

A dependent section of the department of biological psychology should include one of Mental Hygiene; where students could go for information in regard to themselves and for assistance in attempting to estimate their own adjusting capacities. Practical experience teaches that it would often be possible to avert many of the disasters

that occur later in life to those who have struggled to attain what in conventionality are called "the advantages of a higher education." The surest protection insuring us against the possibility of a mental breakdown is a good heredity and of almost equal importance the early acquisition of good mental habits.[1]

[1] From an address on "Educational Methods and Mental Efficiency" delivered before the Mental Hygiene Conference in 1912 by Dr. Stewart Paton.

VIII

A National Movement to Improve Mental Efficiency

By THOMAS W. SALMON, M.D., Director of Special Studies for the National Committee for Mental Hygiene

ALL efforts to safeguard health are made in the field of public hygiene (sanitation) or in that of personal hygiene. In the prevention of many diseases it is necessary to carry on activities in both fields.

The measures in public hygiene for the prevention of typhoid fever, for instance, include the protection of water supplies, the sanitary disposal of sewage and the destruction of insects which carry typhoid bacilli from infected material to food, while in the field of personal hygiene are the efforts of individuals to raise their immunity to this disease by inoculation with typhoid vaccine and the detection and isolation of "carriers," those who while well themselves may bear the disease to others. Again in the prevention of malaria, destruction of the breeding places of mosquitoes is a procedure in public hygiene, while taking prophylactic doses of quinine is a matter of personal hygiene. There are few diseases

which can be successfully prevented by efforts in one of these fields alone.

Until recently, the prevention of mental diseases was thought to be almost wholly a matter of personal hygiene. It has been shown, however, that there are public measures in mental hygiene without which the efforts of individuals are likely to be unavailing and, on the other hand, much must be done in the field of personal hygiene, if the efforts of the community as a whole to lessen mental disease are to succeed. The preceding chapters of this book have been devoted very largely to those principles which must guide the individual in safeguarding his mental health and increasing his mental efficiency. The following short account of the work of a national agency for mental hygiene may serve to show some means by which such individual efforts may be initiated and then coördinated and made effective for the common welfare.

The National Committee for Mental Hygiene, founded February 19th, 1909, came into existence because of the conviction among some of those whose work had brought them closely into contact with the problem of mental diseases that there was urgent need for a national agency to help raise standards in the care and treatment of the insane and to work for the prevention of mental and nervous disorders.

The way in which this sentiment was crystal-

lized has been described as follows by Dr. Lewellys F. Barker, in an address delivered at the Fifteenth International Congress on Hygiene and Demography: "This impulse, thanks to the initiative of a layman, Clifford W. Beers, author of 'A Mind That Found Itself' (now Secretary of the National Committee), whose personal sufferings led him, on recovery, to devote himself to the cause of mental hygiene, and who enlisted the coöperation of a group of representative men and social workers, has found expression in the voluntary formation of a National Committee for Mental Hygiene."

While new methods of treatment and hopeful measures for prevention have been eagerly welcomed and very effectively applied in other fields of medicine, this has not been the case in the care of the insane and the prevention of mental diseases. In this country at the present time the care of those ill with mental diseases varies in the different States from the kind of treatment which humanity requires for all other classes of the sick to methods which have come down to us from an age when the insane were looked upon with superstitious fear and when cruelty and neglect were their usual portion. It is apparent that only a nation-wide movement—carefully planned, scientifically directed and adequately financed—can deal with the varied and complex causes for these conditions or, indeed, even can

secure the accurate information necessary for effective work in ameliorating them.

The Importance of the Problem

On the date of the last federal census, January 1, 1910, there were 187,454 persons in institutions for the insane in this country. This number exceeds the number of students in all the colleges and universities in the United States. It exceeds the number of officers and enlisted men in the United States Army, Navy, and Marine Corps, and it exceeds the population of Columbus, Ohio, the twenty-ninth city in size in this country. About 30,000 new cases of mental disease are admitted to institutions in the United States each year and the annual increase in the number of patients under treatment is about 6,000. If all the States provided for their insane as adequately as do New York and Massachusetts, there would be more than 300,000 patients in institutions. A more concrete illustration of the prevalence of insanity is the fact that the number of hospital beds for the insane in New York City exceeds the number of hospital beds in all the general hospitals of that city.

The cost of caring for the insane in a State making adequate provisions exceeds any other single item of expense, except the amount expended for public education. The average annual

cost of maintenance in institutions for the insane in the United States is about $175 per patient, making the total cost during the year 1910 for those in institutions, $32,804,450. As it is estimated that the cost of the Panama Canal will be $325,201,000, and that it has taken almost ten years for its completion, it is seen that the annual cost of caring for the insane is greater than the annual cost of construction of that great work. The latter sum is so great that it was deemed necessary to distribute it over a number of years by the issuance of bonds; whereas the cost of caring for the insane is an annual expense, which has to be met from current revenues of the States.

In order to state fairly the cost of mental diseases there must be added to this great sum the economic loss to the country through the withdrawal from productive labor of so many people in the prime of life. It has been stated by the United States Commissioner of Labor that the average value to the community of an adult between the ages of 18 and 45 is $700 a year. Estimated upon this basis, the annual economic loss to the United States through the confinement of 187,454 people in institutions for the insane is more than $130,000,000. If this is added to the cost of maintenance the total is more than $162,000,000—an amount equal to the entire value of the wheat, corn, tobacco, dairy products, and

beef products exported annually from the United States.

Such statistics serve as a means of comparison but they cannot convey an adequate idea of the most serious results of mental diseases—the personal suffering and unhappiness, the social and family disasters and the business troubles which they cause. It should be remembered that the same factors which bring about the commitment of people to institutions for the insane are responsible for much mental disease which is never recognized and for loss of efficiency, failure to meet difficult situations of life and conflicts with conventions and laws. These often depend upon mental disorders or mental defects, although the fact is not generally recognized. Accounts of murders, suicides, marriage troubles and many kinds of misdemeanors often have a very definite meaning for those who are familiar with the abnormalities of conduct which result from mental disease. The frequency of these social disasters indicates the inadequacy of present methods of dealing with the problem of mental diseases.

Humanitarian and economic reasons alike call for organized efforts to control the spread of insanity. It is known that there are certain *essential* causes of mental disease and that some of these essential causes are within our control. In 1913, 499 persons died from typhoid fever in New York City, while more than 500 persons with general

paresis (all of them certain to die of their disease) were admitted during the same period and from the same population to hospitals for the insane. Syphilis causes other mental diseases, and there is probably no other single cause for insanity responsible for a greater number of cases. In spite of this it is an amazing fact that many of those most active in the field of venereal prophylaxis are not aware that such a prevalent and uniformly fatal disease as general paresis depends upon previous infection with syphilis. About 20 per cent. of all first admissions to hospitals for the insane are on account of the alcoholic psychoses, forms of mental disease which depend upon another essential cause of insanity. These are two controllable causes of mental disease.

In the varied conditions capable of producing mental disease there are many other controllable causes, some of them deeply imbedded in the social fabric and touching many phases of personal life, education, and general preventive medicine. This fruitful and most important field for work in the prevention of disease has practically been neglected thus far, very largely on account of lack of popular information.

The most effective work in the prevention of insanity, as well as in increasing the efficiency and happiness of those who do not become insane, must be done in early life. We know that much mental disease and more disaster from imperfect

adjustments to life of a little different sort depend upon inadequate equipment to deal with difficult situations and upon attempts of people to live upon levels of activity for which their mental equipment and training have not fitted them. We know that in not a few cases these inadequacies of equipment and this tendency on the part of people to take up tasks for which they are manifestly unfitted may be recognized at a very early period and we suspect that much could be done by recasting educational methods and providing for individual needs to remedy these conditions. This, after all, is the true purpose of mental hygiene. As issues become clearer and people turn to the consideration of these subjects it will fall to this Committee to give constructive suggestions for including in the purposes of education the determination of the levels of capacity of different individuals at which life may be conducted the most successfully. We may be able to show that any educational system should include the recognition and possible correction in the schools of tendencies which may wreck happiness and usefulness in future years.

General Plan of the Work

What has been presented is a very broad outline of the field which the National Committee for Mental Hygiene has entered. It is realized fully

that in such an immense field efforts might easily be so poorly directed as to accomplish few specific results. With this in mind, a plan for systematic, constructive work, by which different phases of the subject are to be dealt with one at a time, has been prepared. Nearly three years were devoted to careful study before this plan was adopted and it was decided that the time had come to commence active work and to appeal for support. The plan may be summarized under three principal heads. The first is *original inquiry* regarding the status of the care of the insane in this country—including not only care of patients in special institutions but care in the communities, in general hospitals, and pending admission to hospitals; regarding the opportunities for effective work in betterment, and prevention and, as resources permit, regarding some of the more important controllable causes of mental disease. The second is *popular education*, by which the importance of the subject can be impressed upon the public, and facts already known and those ascertained by special studies regarding conditions for care and treatment, and the preventable causes of mental diseases, can be made widely known. The third is the *organization of agencies* to take part in movements for betterment and prevention, including existing agencies (Federal, State, and local) and State and local societies for mental hygiene organized for these special purposes.

The following outline of the work proposed under the heading *original inquiry* is from the plan of work adopted:

"A study will be made of the operation of the laws relating to insanity and the insane; the official methods of dealing with mental cases; the extent and character of institutional care; the extent and character of care outside of special institutions, the methods of discharge of patients and their return to normal conditions, and such other particulars as it may seem necessary to inquire into with a view of securing for the National Committee full and accurate information concerning the situation in the several States."

Work in accordance with these plans has been carried on steadily during the past two years. It seemed essential at the outset to obtain a clear idea of the provisions for the care and commitment of the insane in the several States which are afforded by present statutes. The kind of care received by the insane depends upon legislation more than does the care of any other classes of the sick. Indeed, good laws regarding the insane are the essential foundation for good care, so we secured the services of Mr. John Koren, who for several years had been in charge of the statistical studies of the insane made by the United States Census Bureau, and who had already collected a great deal of material on this subject. Mr. Koren prepared a summary of these laws, which has

been published by this Committee, and which has proved of great use not only to us but to others interested.

Besides information regarding special topics, a great deal of general statistical information relating to some of the larger aspects of our problem (such as the prevalence of mental disease, its relation to immigration, etc.) has been gathered and made freely available to all who desire it.

In view of the vital importance of improving facilities for early diagnosis and treatment of mental diseases, special efforts have been made to obtain all the information available regarding psychiatric clinics and psychiatric wards, and pavilions in connection with general hospitals. Plans of nearly all such institutions in the United States have been secured and redrawn to a uniform scale. A publication will be issued describing them and giving detailed information as to their cost and cost of maintenance, the organization of their medical and administrative services, the purposes intended to be served and the actual results obtained. It has been found possible to have excellent prints in black and white made of these plans. A number have been secured so that persons seeking information on this subject can be supplied.

Studies of a number of such special problems as the unique mode of care known as the " Wisconsin system " have been carried on.

It has been encouraging and especially interesting to have many spontaneous appeals made to us for information on various phases of mental hygiene. The following requests for information, which were received during a very short period, may serve as illustrations:

The medical examiner of a State Bureau of Child Labor asked for detailed suggestions for making mental examinations of children applying for labor permits.

A vigilance association asked for information regarding the relation between syphilis and insanity and, after receiving it, printed a special pamphlet on the subject.

The Master-in-Lunacy of the State of Victoria, Australia, asked for information regarding the early treatment of mental diseases in psychopathic hospitals and psychopathic wards in general hospitals.

The Tuberculosis Committee asked for information regarding the relation between tuberculosis and mental disease.

The Director of Physical Training in the public schools of a large city asked for an outline on mental hygiene to include in a course on hygiene for teachers.

The Secretary of the Young Men's Christian Association in Peking, China, asked for publications on mental hygiene to be placed in a library used by officials and students.

A clergyman engaged in a "no-license" campaign in the West asked for charts showing the

relation between alcohol and insanity for display in store windows.

The Director of the Bureau of Social Welfare in a western university asked for suggestions for useful fields of effort for an extension division.

A number of teachers of biology and of sociology in universities asked for data on various phases of mental hygiene to use in their classes.

The editor of a magazine in the South asked for information regarding the relation of immigration to insanity.

An instructor in sociology in a southern college asked for suggestions for a genetic survey of a town of 1,200 inhabitants.

The Director of a hospital for the insane in Canton, China, asked for data on the causes of insanity to translate into Chinese for wide distribution.

A member of a lodge of young men in the West asked for a frank statement regarding the physiological effects of continence, stating that he had been delegated to do so by the others who were sincere in asking for information for their own guidance.

A Professor in Wellington College, Cape Colony, South Africa, asked for information regarding mental hygiene and the formation of a mental hygiene exhibit.

The Attending Physician of a rescue home for girls asked for advice regarding psychological and psychiatrical studies of girls in her care.

A number of persons submitted proposed amendments to insanity laws in different States and asked for opinions as to their form and purposes.

The Bureau of Criminology Research in the Department of Sociology of a large university asked for advice regarding certain researches into the relation between mental defect and crime which the Bureau was about to undertake.

These are typical inquiries. An attempt is made to give a very careful answer in each case. This necessitates, of course, a considerable amount of inquiry and consultation with those most familiar with the different problems. It consumes a great deal of time, but it seems very desirable to meet such demands adequately, for one of the objects mentioned in the statement of our plans is " to serve as a clearing house for the nation on the subject of nervous and mental disorders, and in the care and treatment of the insane."

Social Service by Correspondence

While it is not one of the purposes of the National Committee for Mental Hygiene to give aid in individual cases, that being a function of local agencies, many such cases have been presented in a way making it impossible to withhold advice or assistance. Several articles relating to the work of this committee appearing at about the same time in the " Outlook," the " Cosmopolitan," and the " American " magazines, gave rise to a flood of letters from nearly all the States, and from

several foreign countries. Some of these letters could be answered by the statement that the advice desired could not be given without a personal examination, or that publications on the special topic mentioned were not, at the time, available, but more than five hundred of these inquiries have received careful personal attention, so urgent seemed the need for advice. Quite a number of persons suffering from mental diseases have, by this means, been placed in touch with physicians in different localities. In order that this may be done most effectively, a card-index has been prepared of the physicians in the different States who are members of psychiatrical or neurological societies or who are known to have devoted especial attention to mental diseases.

Thus it will be seen that this purely philanthropic organization has become a national institution for increasing mental efficiency. It is a unique organization, and is proving a most helpful one. For it dispenses information about topics of utmost importance to the individual—information that it is practically impossible for most persons to acquire in any other way at the present time. In effect it is a national free clinic conducted by competent persons whose object is to better the condition of the individual directly, and thus indirectly raise the general standard of mental efficiency.

One cannot help being impressed by the helplessness in dealing with mental illness which these appeals disclose. They provide material for a very convincing statement of the need for local societies or committees for mental hygiene to deal with personal problems.

Aid in Movements for Betterment

Efforts have been made to assist in every movement to improve conditions among the insane or to undertaken in prevention which has come to our attention. We have furnished information or advice, or have coöperated in other ways, in attempts to secure better laws or to deal with special problems in Alaska, California, Connecticut, Maine, Massachusetts, Minnesota, Missouri, New Jersey, New York, Oklahoma, Pennsylvania, Texas, and Wisconsin.

One of the stated objects of this Committee is: "To enlist the aid of the Federal Government so far as may seem desirable." The most important step taken by this Committee toward this end was an interview with President Wilson. The importance of the subject of mental hygiene was presented, and each of the points of contact which the Federal Government has with mental hygiene was mentioned. Some of these are the work of the Public Health Service in general preventive

medicine, but particularly in the mental examination of immigrants, and in the dissemination of information regarding the causes and prevention of disease; that of the Census Bureau regarding the insane in institutions; that of the Bureau of Education; the care of the insane in Alaska and in our insular possessions; the care of insane Indians; the work of the Government Hospital of the Insane, and the work of the recruiting services of the Army and Navy. In this connection it is not without interest that a very defective commitment law and most inadequate quarters for the detention of alleged insane persons pending their commitment are to be found in the District of Columbia.

This Committee has directed attention to the importance of the exclusion of the insane and mentally defective immigrants. Assistance and advice has been given to several official Commissions appointed to study this subject. Representatives of the Committee have appeared before Committees in Congress and they were present at a hearing given by President Taft in 1913. In all that has been done, especial pains have been taken to make it clear that our interest in immigration problems relates only to this particular phase. Better and more humane methods of deportation have also received attention, and some suggestions made by us have already been put into effect.

State Societies and Committees for Mental Hygiene

During the past year the growth of the work of State Societies and Committees for Mental Hygiene and the development of interest in such agencies in States where they have not yet been organized has been steady and gratifying.

State Societies are now in operation in Connecticut, Illinois, Massachusetts, and North Carolina, and their equivalents, in the form of Mental Hygiene Committees which are sub-committees of some other organization, are in operation in New York, Maryland, and Pennsylvania. These seven agencies are affiliated with the National Committee and look to it for advice and assistance, thus making it possible for our National agency to help standardize and coördinate the work. In Rhode Island, Maine, Indiana, Michigan, California, and Texas, moves toward organizing societies are also being made.

In this brief report, a description of the work of the several State Societies and Committees cannot be given. Suffice it to say, that such agencies are now at work in States which on January 1, 1910, had 80,119 patients in hospitals for the insane—nearly one-half of the total number of patients in such institutions in this country. When the agencies now in process of organization shall have begun work, State Societies for Mental Hygiene will be working for improved care and

treatment for more than 110,000 of the 187,454 insane patients reported in institutions in the United States on January 1, 1910.

Interest in Other Countries

In Canada, the Canadian Medical Society has organized a Mental Hygiene Committee which will be represented at the Convention in Baltimore. In South Africa, also, a Society, known as the "South African Committee on Mental Hygiene," was founded last June. Thus the movement may be said to be already international in scope.

It is the aim of the National Committee for Mental Hygiene to bring about a new realization of how the insane have failed to share in the advance in the care of the sick and cause, also, a general awakening to the fact that the prevention of mental diseases has thus far failed to become a part of the advance in preventive medicine. When these neglected responsibilities are assumed, the returns will be as large as those resulting from any other work for human happiness and efficiency which is being undertaken to-day.